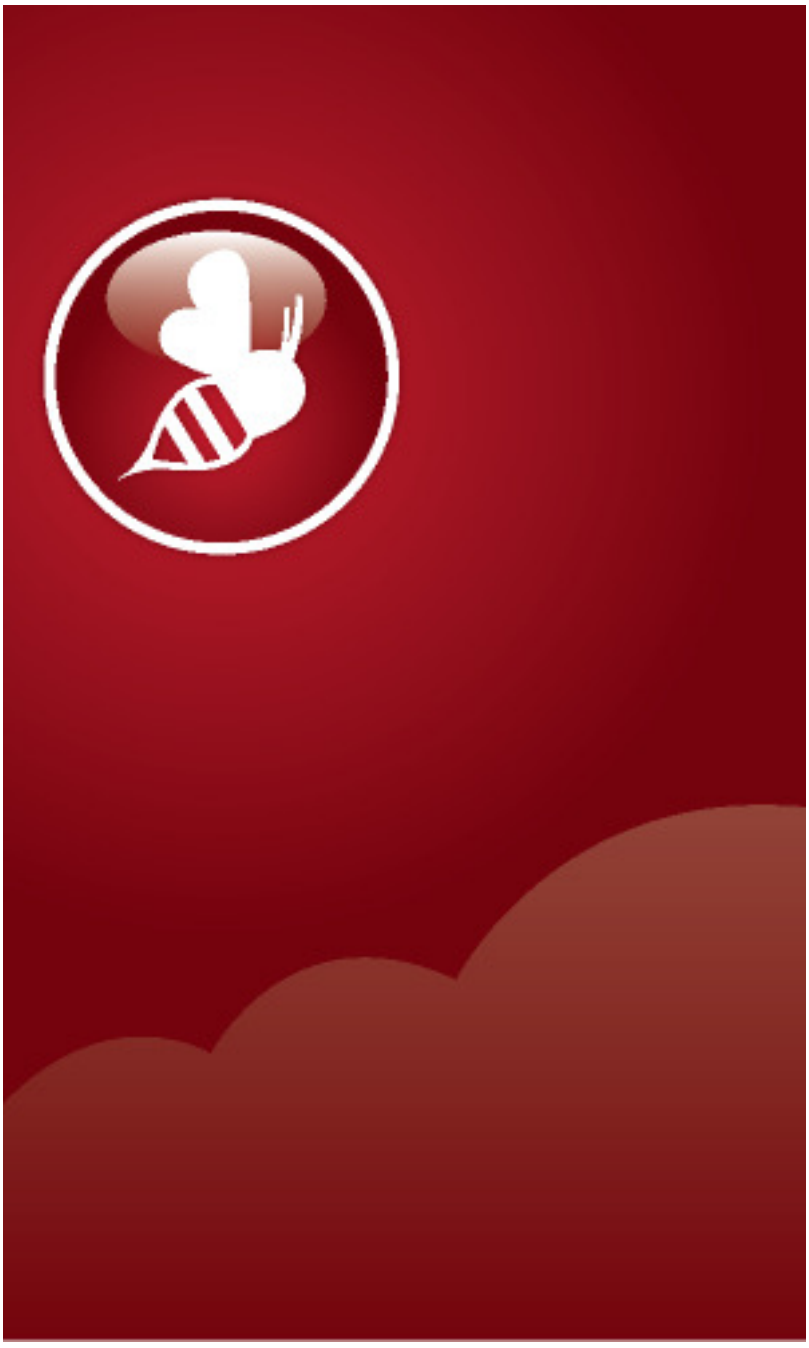
awanbee™ Pro



User Manual

January 2011

Your Data Available...
Anytime, Anywhere

DATAHIVE

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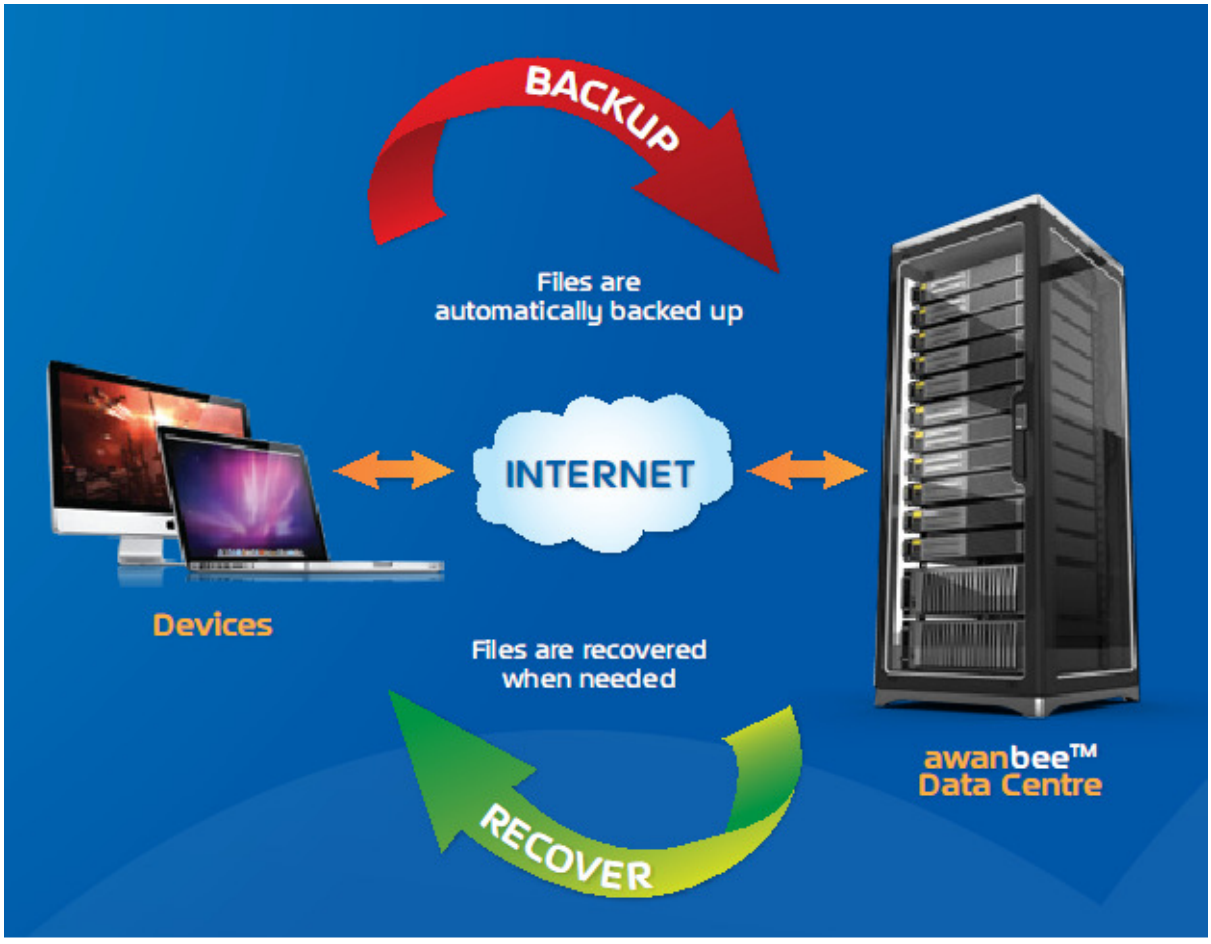
1. Introduction to awanbee™ Pro

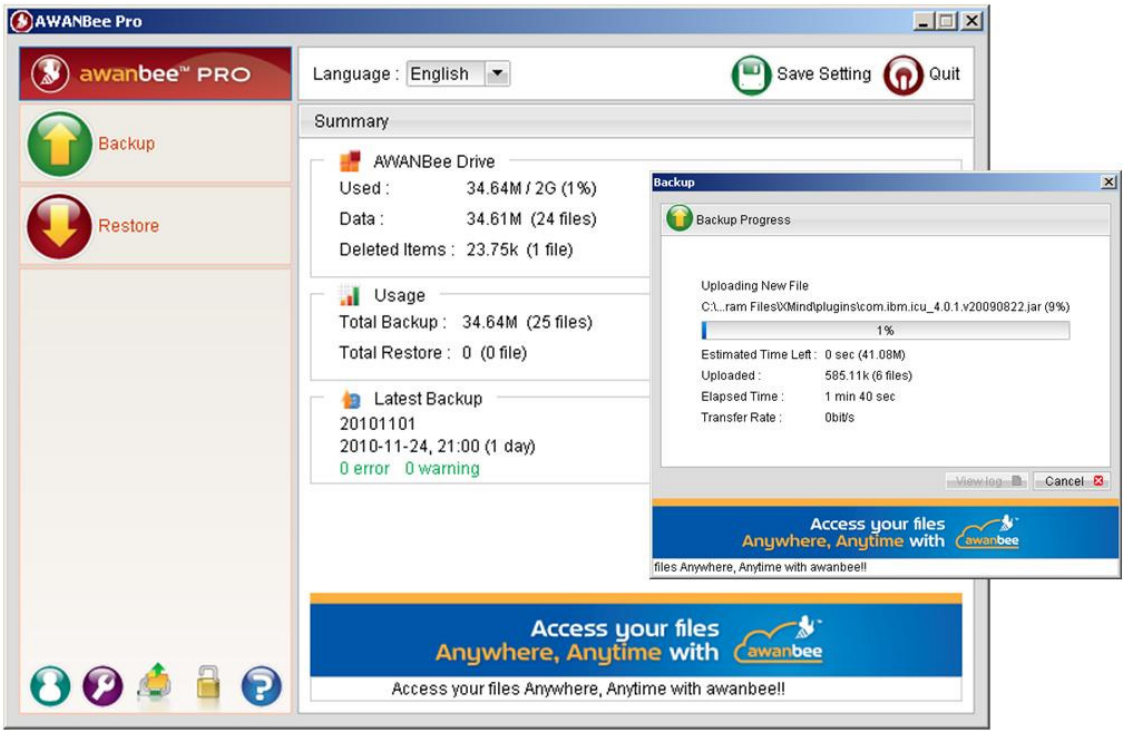
awanbee™ Pro offers an automated service that is able to seamlessly backup enterprise data. awanbee™ Pro is an online, automated back-up service utilizing Cloud Computing Infrastructure (CCI) for businesses. It offers a feature-rich service suited to the growing needs of IT-intensive enterprises, and is backed-up by innovative technologies to simplify and make backup affordable.

By having data backed up to a secured data centre, in which data is backed up and, when necessary, retrieved, users will benefit from high speed data protection. Users can also enjoy the security and comfort of having awanbee™ Pro running on their digital devices such as laptops, PCs and servers. It will provide enterprise users with peace of mind just knowing that their mission-critical data is being continually backed up in a secure manner.



Every single feature of awanbee™ Pro was built based on these three pillars – Security, Availability and Performance. This provides awanbee™ Pro users the confidence and comfort to backup all their critical data on the cloud and then access the data anytime, anywhere.

awanbee™ Pro has a neat and simple interface, which is specifically designed to ensure enterprise users can back up files on their computers with ease. While the interface looks simple, it hides a powerful set of features behind it.



1.1 Benefits of awanbee™ Pro

1.2 Major Features of awanbee™ Pro

1.2.1 Supports Major Operating Systems

awanbee™ Pro supports all major and latest operating systems that are available in today's market, e.g. Windows, Mac, Linux and Unix. Thus, awanbee™ Pro can be deployed in a heterogeneous environment, which provides the flexibility to protect data beyond restrictions of operation platforms and application dependency limitations. This will ensure all data in the operating platform and its related applications are protected and ready for recovery at any point of time, from any platform.

1.2.2 Protects Email Repository

Most popular email readers such as MS Outlook, MS Outlook Express, Mozilla Thunderbird and Mac OS X Mail can be seamlessly protected by awanbee™ Pro. Common perception of difficulties in backing up emails and address books will be alleviated. With awanbee™ Pro, protecting these data will be really easy and the recovery process will be seamless as well

1.2.3 Secure Data Transport Featuring 256–Bit Encryption

Data that will be transmitted from the user's computer to the awanbee™ Data Protection Server will be encrypted in order to maintain data privacy and confidentiality. This encryption is highly secure, fast, and has a small computing resource requirement.

1.2.4 Complete Activity Report including Backup & Recovery Attributes

Comprehensive reports inclusive of all the backup and recovery activities and attributes will be sent via email to each awanbee™ Pro user. Reporting will include overall backup & recovery status and statistics highlighting the number of new, updated, deleted and moved files that have been backed up.

1.2.5 Web Based Recovery - awanbee™ Drive

awanbee™ Pro users can restore their backup save-sets by using any Web browser as long as there is Internet connectivity. During extreme conditions such as a machine failure, theft of the device or while travelling, users can make use of the web based recovery feature to retrieve backed up files. With awanbee™ Pro, data is available ANYTIME, ANYWHERE.

1.2.6 Dynamic & Scheduled Bandwidth Throttling

awanbee™ Pro users will be allowed to choose how bandwidth is allocated for the backup process. While the backup process takes place in the background, bandwidth will be consumed as the data changes are transferred to the central server. The first option, which is the default option, is the dynamic bandwidth allocation. With this option, the client software will monitor the user's activity and will adapt the bandwidth usage accordingly.

For example, if the user is consuming a time-sensitive Internet application, i.e. video streaming, the amount of bandwidth allocated to the backup process will be cut back significantly. When the computer is idle, i.e. the user is away from the desk, the bandwidth usage for the backup will be increased.

1.2.7 Continuous Protection for Files

Continuous real-time capturing of changes that are made to the data will help users retrieve their data at any point of time. Continuous Data Protection (CDP) will automatically save copies of every change that is made to that data, essentially capturing every version of the data that the user saves. Thus, CDP provides an automatic means of continuous protection – effortlessly and transparently, without any need for human intervention.

1.2.8 Agile Restartable Backup & Restore

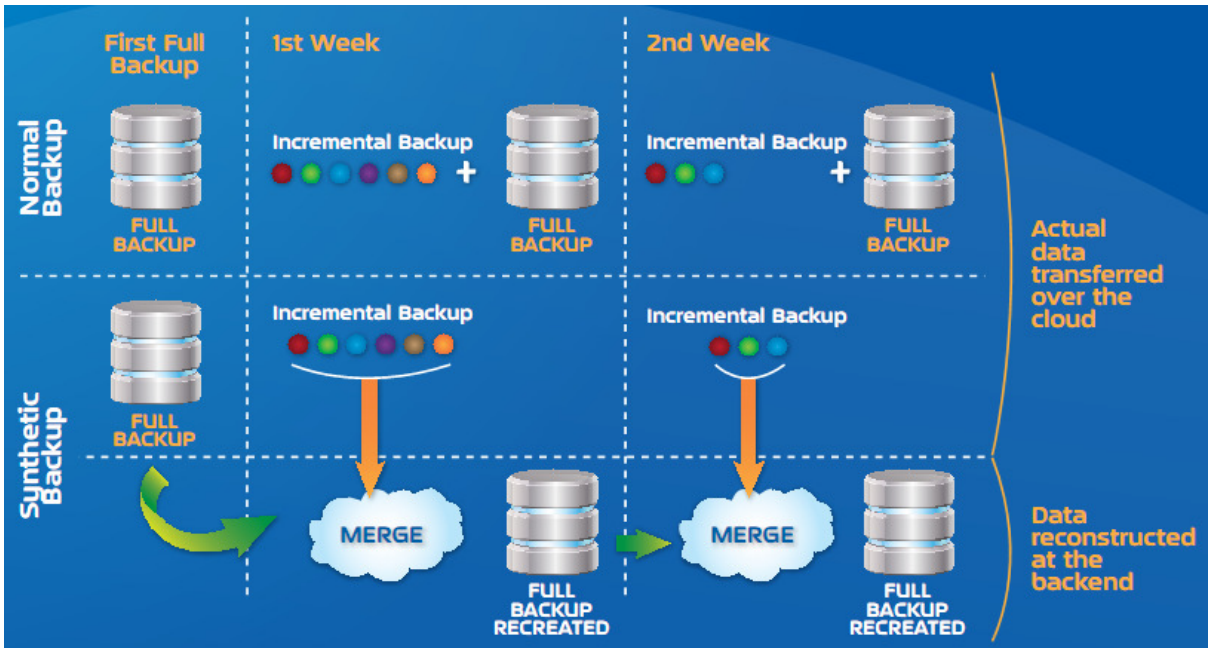
The process of backing-up or restoring can be stopped and restarted easily and seamlessly via the awanbee™ Pro client. The process may need to be halted due to a number of factors, i.e. problem with the network connection or the user's option to control the CPU usage of the process. When the process is restarted, either manually or automatically based on a pre-determined schedule, it will continue from the exact point where the process was stopped earlier, rather than starting from scratch. This not only saves time, but also reduces the CPU requirements on the client side and reduces the amount of bandwidth used on the network.

1.2.9 Open File Backup Support

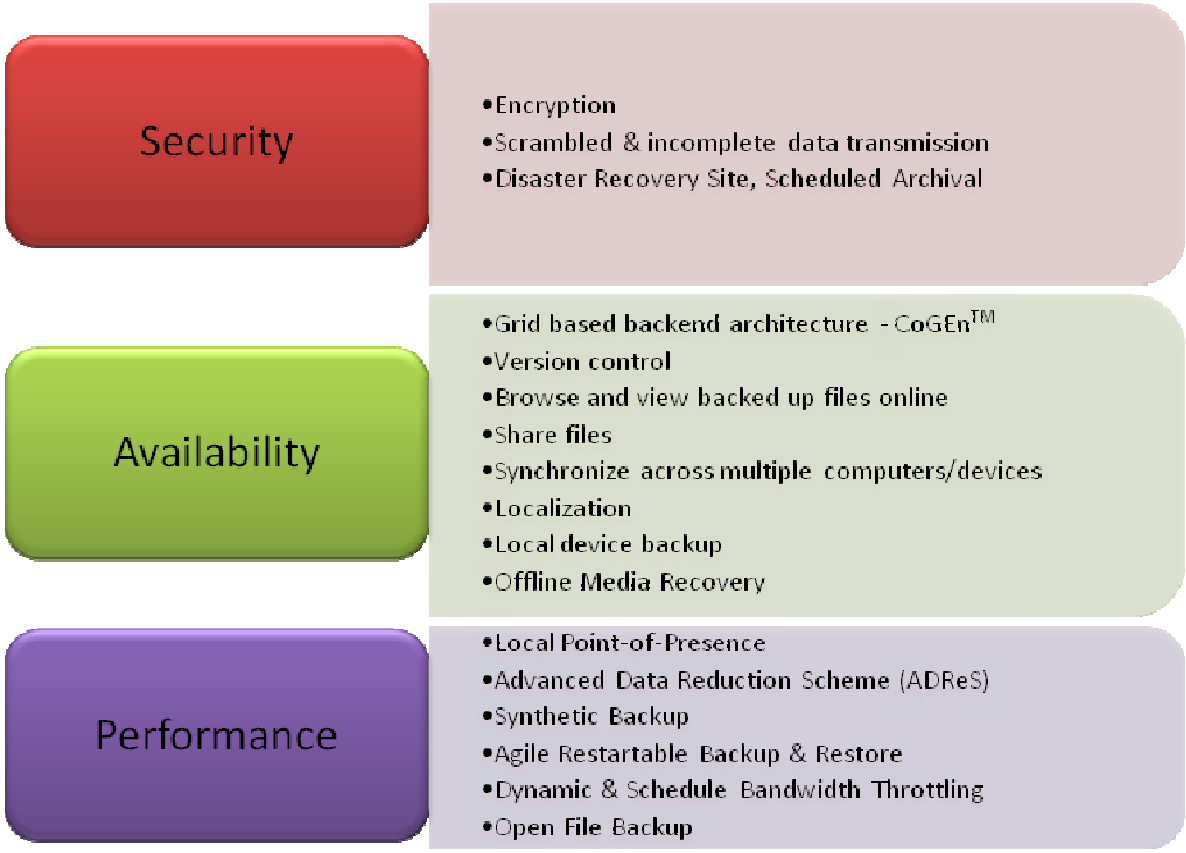
Most operating systems will disallow the copying of an already open file. For example, MS Outlook's PST file cannot be backed up while it is being accessed by the user. The only time that such files can be backed up is when they are not in use. This is dangerous and risky, as the window of opportunity to backup such a file when it is not in use, is quite limited. In order to ensure such 'open' files are continuously backed up, the awanbee™ Pro client will utilize the Microsoft VSS Framework, making sure that all open files are backed up regardless of the status of the file.

1.2.10 Synthetic Backup Support – Incremental Forever

During the first backup instance by the awanbee™ Pro client, every single bit of data is copied over the cloud to the awanbee™ Data Protection server. Every subsequent backup instance process will only involve the incremental changes of the data. This means, only the changes in the data will be tracked and backed up— the whole dataset will not be copied over again. At the backend, an up to-date full backup is consolidated based on the first full backup and the subsequent incremental backups. This consolidation does not affect the client side, and as such it will not impact the performance of the client. It also reduces the amount of traffic that flows through the network. More importantly, as only the incremental data is tracked and backed up, the backup window is kept to the minimum and full restoration, if required, can be done very quickly.



awanbee™ Pro's summary of features is broken down into three categories: Security, Availability and Performance:



2. Installing awanbee™ Pro

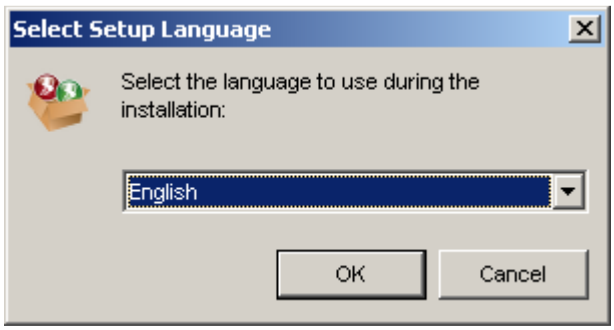
2.1 System Requirements

Supported OS	OS Version	Bit Mode	Hardware Requirements
Windows	2000	32	**Memory** Minimum 1GB **Hard disk space** A minimum of 200MB required for application installation **Network Protocol** TCPI/IP V4
	2003 2003 R2	32 & 64	
	2003 Storage Server	32 & 64	
	XP Prof	32 & 64	
	20083	32 & 64	
	2008 R23	32 & 64	
	2008 Storage Server	32 & 64	
	Vista	32 & 64	
	7	32 & 64	
	Hyper-V Server 2008	32 & 64	
Mac OS X	10.4.x	PowerPC 32/64 x32/64	
	10.5.x	PowerPC 32/64 x32/64	
	10.6.x	x32/64	
AIX	5.2	PowerPC 32/64 x32/64	
	5.3	PowerPC 32/64 x32/64	
	6.1	PowerPC 32/64 x32/64	
FreeBSD	6.2	32 & 64	
	6.3	32 & 64	
	7.2	32 & 64	
HP-UX	11.0 11i	PA-RISC 32/64	
	11.22	IA-64	
	11.23	IA-64	
	11.23	IA-64	
Solaris	8	SPARC 32/64	
	9	SPARC 32/64	
	10	SPARC 32/64	
Linux	All Linux - Kernel 2.4 or above	32 & 64	

2.2 Installing on Windows

Double click on the downloaded installer file, which should look like the following icon:

You will then be provided with an option to select the language to be used during the installation process:



Once a language has been selected and the 'OK' button is clicked on, you will be shown the Welcome screen:

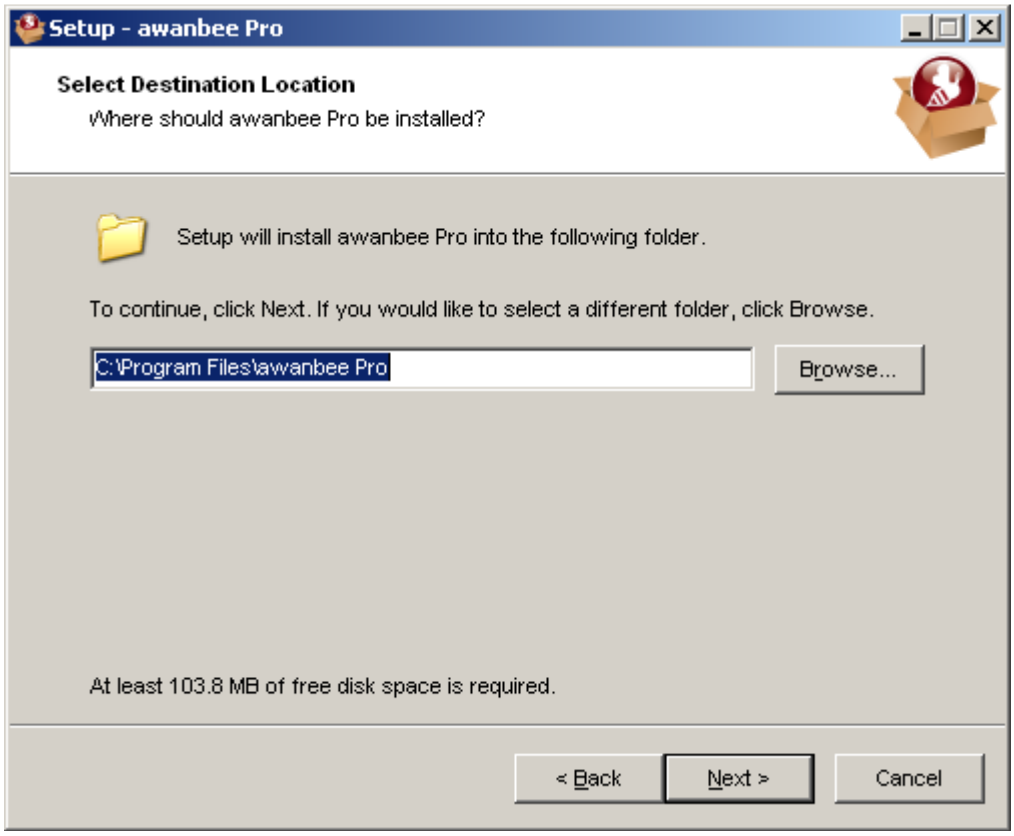
Setup - awanbee Pro
Welcome to the awanbee Pro Setup Wizard
This will install awanbee Pro on your computer.
It is recommended that you close all other applications before continuing.
Click Next to continue, or Cancel to exit Setup.
Next >
Cancel

As suggested, please close all other applications before proceeding with the installation. This will help avoid possible errors that may arise if another application is running during the installation process. Click on the 'Next' button to continue.

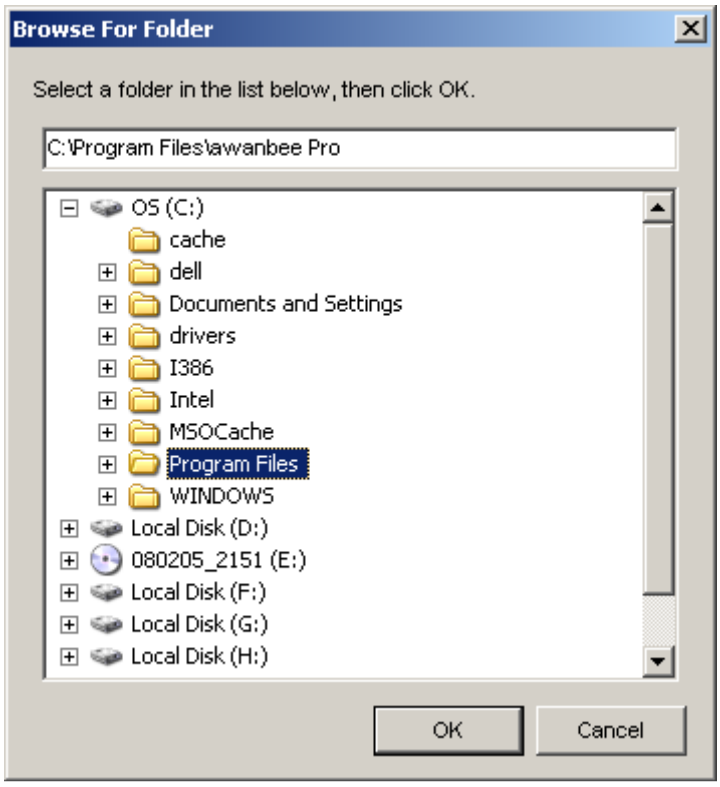
The subsequent screen displays the License Agreement. Please read through this section very carefully and only click on the 'I accept the agreement' option when you have fully understood the contents and its implications. The 'Next' button will only be enabled when you select the 'I accept the agreement' option. Click on the 'Next' button to continue with the installation.

Setup - awanbee Pro
License Agreement
Please read the following important information before continuing.
Please read the following License Agreement. You must accept the terms of this agreement before continuing with the installation.
Terms of Use
1. All softwares provided by Data Hive Inc. is on an "as is" basis with no warranties of any kind and Data Hive Inc. will not be liable for any damages of any kind arising from the use.Data Hive Inc. further disclaims all warranties, express and implied, including without limitation, any implied warranties of merchantability or fitness for a particular purpose.
2. Data Hive Inc. grants you a non-exclusive, non-transferable, royalty-free, limited license to use the binary form of the software provided by Data Hive Inc. for personal use only. Redistribution of programs owned by Data Hive Inc., unless explicitly granted by Data Hive Inc. , is strictly prohibited.
3. All content included on this site, including text, graphics, logos, button icons,
I accept the agreement
I do not accept the agreement
< Back
Next >
Cancel

The next step will ask you to identify the location where awanbee™ Pro should be installed on your computer. The default location provided is “C:\Program Files\awanbee Pro”:

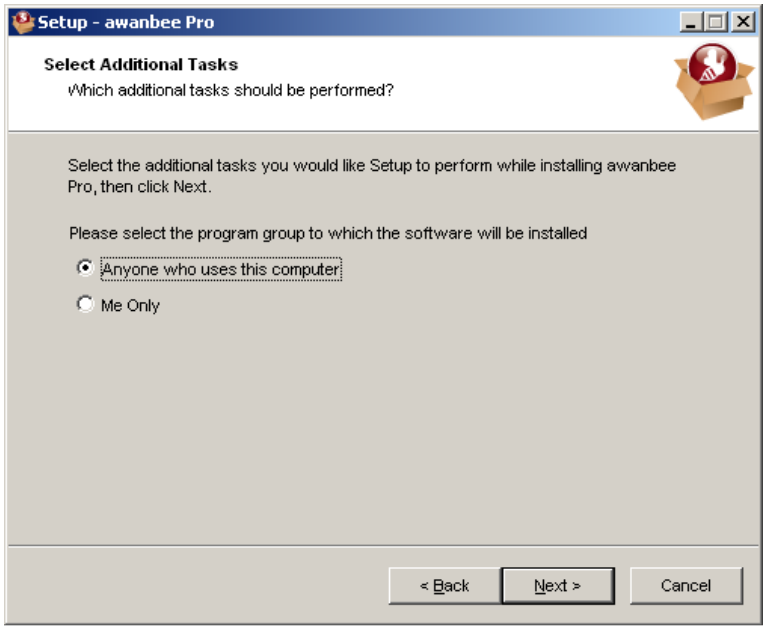

Setup - awanbee Pro
Select Destination Location
Where should awanbee Pro be installed?
Setup will install awanbee Pro into the following folder.
To continue, click Next. If you would like to select a different folder, click Browse.
C:\Program Files\awanbee Pro
Browse...
At least 103.8 MB of free disk space is required.
< Back
Next >
Cancel

If you would like to change it, click on the 'Browse' button and select the folder of your choice:

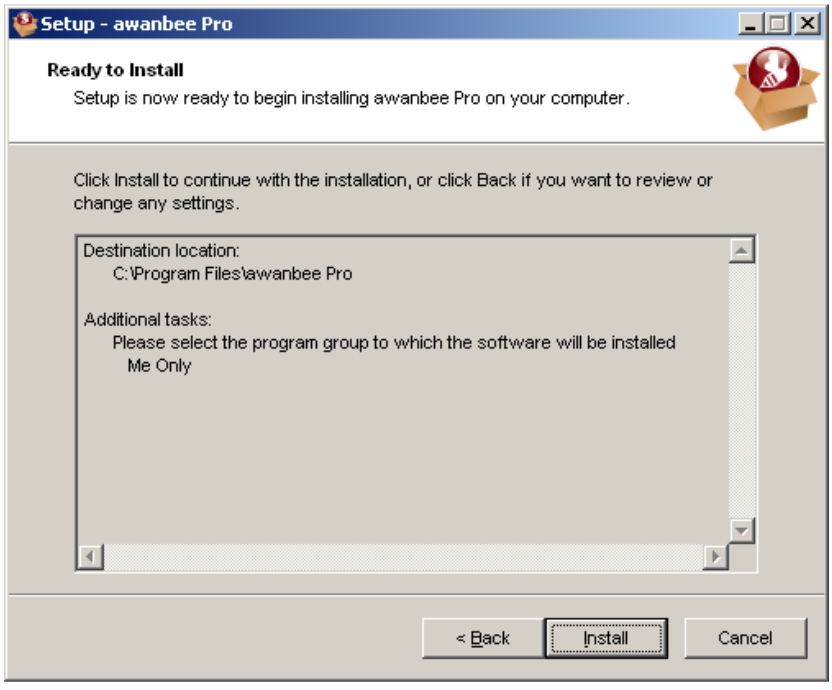


Once the destination folder has been selected, click on the 'OK' button and you will be returned to the previous window. Click on the 'Next' button in the 'Select Destination Location' window to continue.

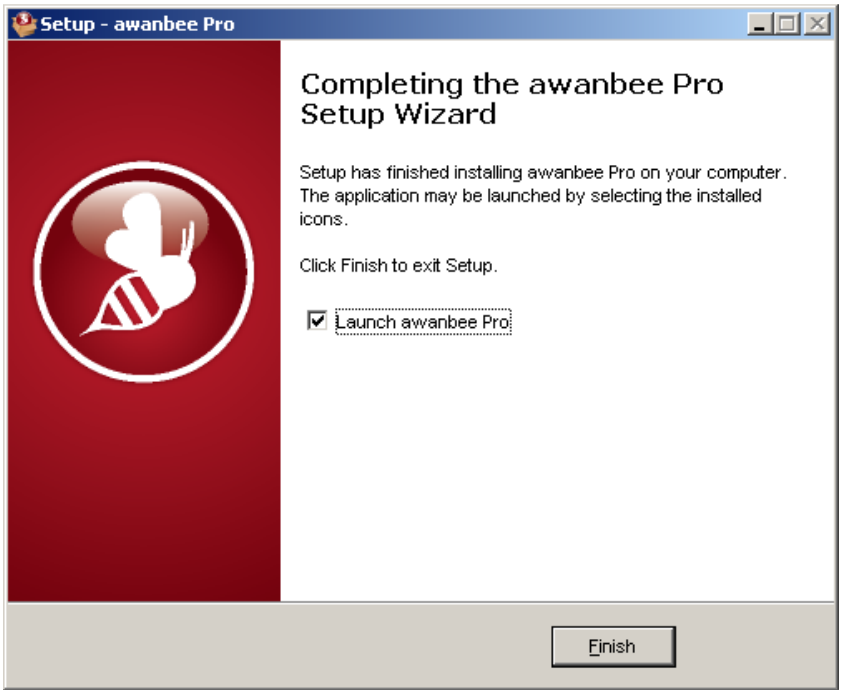
In the 'Select Additional Tasks' window, you will be asked on the preference for user access to awanbee™ Pro software – would you like to be the sole user of the software or do you want to provide access to all the other users of this computer?


Setup - awanbee Pro
Select Additional Tasks
Which additional tasks should be performed?
Select the additional tasks you would like Setup to perform while installing awanbee Pro, then click Next.
Please select the program group to which the software will be installed
Anyone who uses this computer
Me Only
< Back
Next >
Cancel

Once you have made your choice, click on the 'Next' button. This will bring you to the 'Ready to Install' window which summarizes all your previous selections. If you would like to make any changes, just click on the 'Back' button as many times as required until you reach the window where you would like to make a change. If you are ok with the selections made, click on the 'Install' button to start the installation process.


Setup - awanbee Pro
Ready to Install
Setup is now ready to begin installing awanbee Pro on your computer.
Click Install to continue with the installation, or click Back if you want to review or change any settings.
Destination location:
C:\Program Files\awanbee Pro
Additional tasks:
Please select the program group to which the software will be installed
Me Only
< Back
Install
Cancel

The installation will take a few moments. Once it is completed, you will be given a prompt to indicate the successful completion:


Setup - awanbee Pro
Completing the awanbee Pro Setup Wizard
Setup has finished installing awanbee Pro on your computer. The application may be launched by selecting the installed icons.
Click Finish to exit Setup.
Launch awanbee Pro
Finish

You are also given an option to launch awanbee™ Pro immediately. Click on the 'Finish' button and you are done!

3. Using awanbee™ Pro

On Windows, you can launch awanbee™ Pro via three ways:

1. Double clicking on the awanbee™ Pro icon on the desktop:

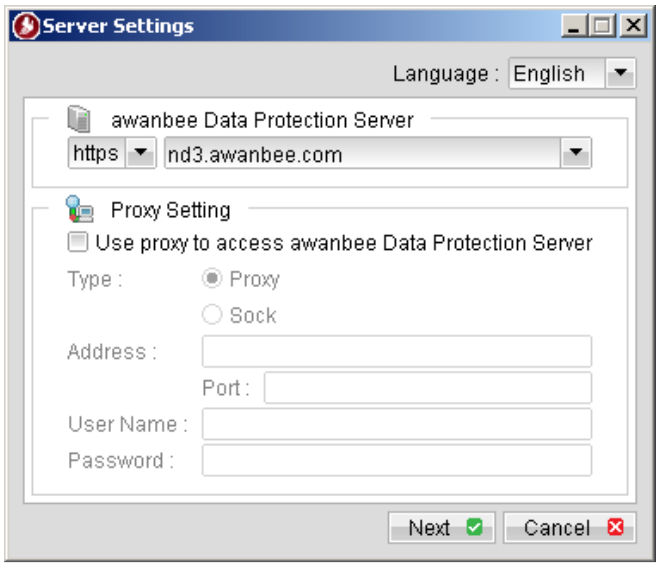
2. "Start -> Programs ->awanbee Pro" menu

3. Double clicking on the awanbee™ Pro icon in the System tray launcher:

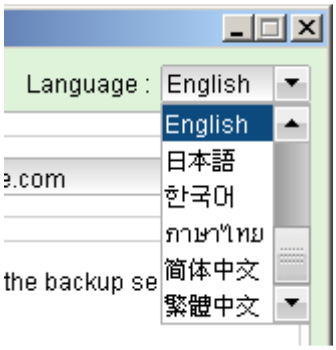
Once launched, you will notice the awanbee™ Pro splash screen, with a status message at the bottom showing the connection process with the awanbee™ Data Protection server:

3.1 First time use

Just after the installation, you will be given the option to configure a number of settings:



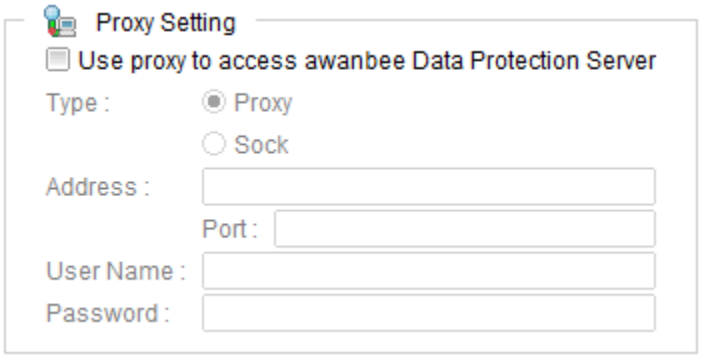
First off, you can select the language for the interface at the top right hand corner of the window. The languages currently supported are: English, Chinese (both Traditional & Simplified), Thai, Japanese and Korean.



Once a choice has been made, all the words in the interface will automatically change to the selected language.

The address of the awanbee™ Data Protection Server, where your data will be backed up, is stated in the 'Backup Server' section. The server's address and protocols are already pre-defined. As such, there is no need to change them, unless there is a need to troubleshoot any problems. You will be given detailed instructions by our support team when such a need arises.

If you happen to be using a proxy server as part of your Internet connection, you can enter the details of the proxy setting in the following section:

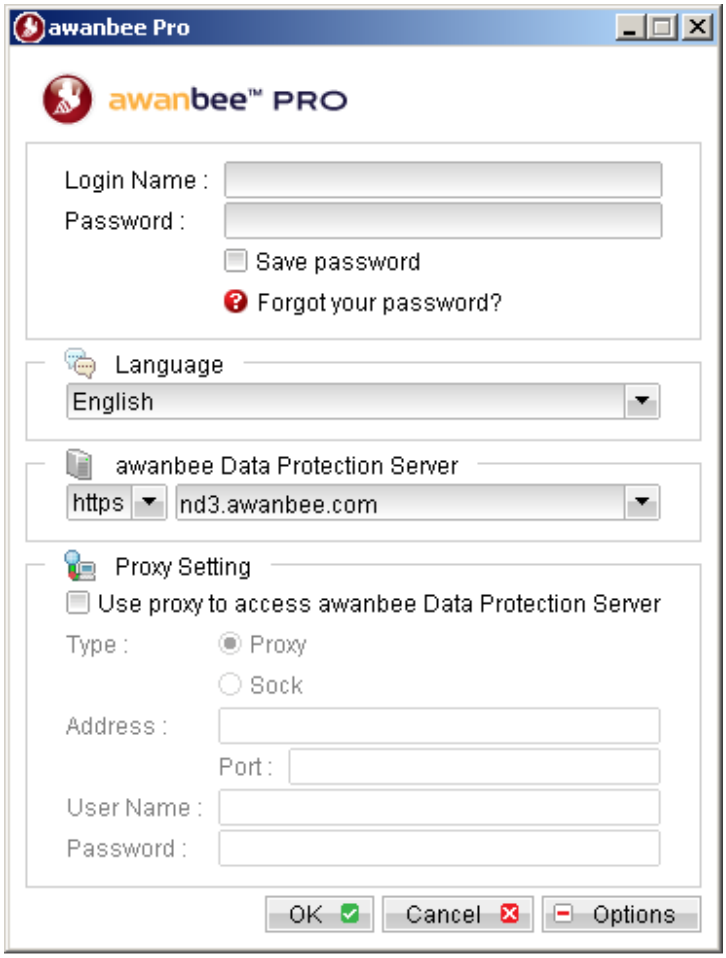


If you are unsure if you are behind a proxy server, please refer to your Internet Service Provider or your Network Administrator. Once you are done with this section, click on the 'Next' button to login:

Enter the login name and password that you had created during the registration process. Please note that both the login name and password are case sensitive. In case you have forgotten your password, enter your login name and click on the 'Forgot your password' link. A new password will be sent to your e-mail, the same address you had entered during the registration.

If you would like the client to remember your login name and password, check the 'Save password' box. The next time you start up the client, you will automatically be logged in.

If, at this stage, you would like to make changes to the server settings, click on the 'Options' button and you will be provided with an expanded window detailing out all the settings mentioned above:



Once you have entered the login name, password and any changes to the server settings, click on the 'OK' button to login.

After your first login, you will be asked to create a backup set – folders, files and/or applications that you want to backup. See Sections4.6.1.1, 4.6.3 and 0for full details.

Once the backup set has been created and the schedule to run the backup has been set, you are done! awanbee™ Pro will back up the files, folders and/or application identified earlier, according to your chosen schedule, without your intervention from now on.

4. awanbee™ Pro User Interface

Once you have successfully logged in, you will see awanbee™ Pro's main window (next page).

awanbee™ Pro: Main Window

Language selection for the user interface. Six options: English, Chinese (both Traditional & Simplified), Thai, Japanese and Korean

Save all the settings, configuration details, etc on to the awanbee™ Data Protection Server

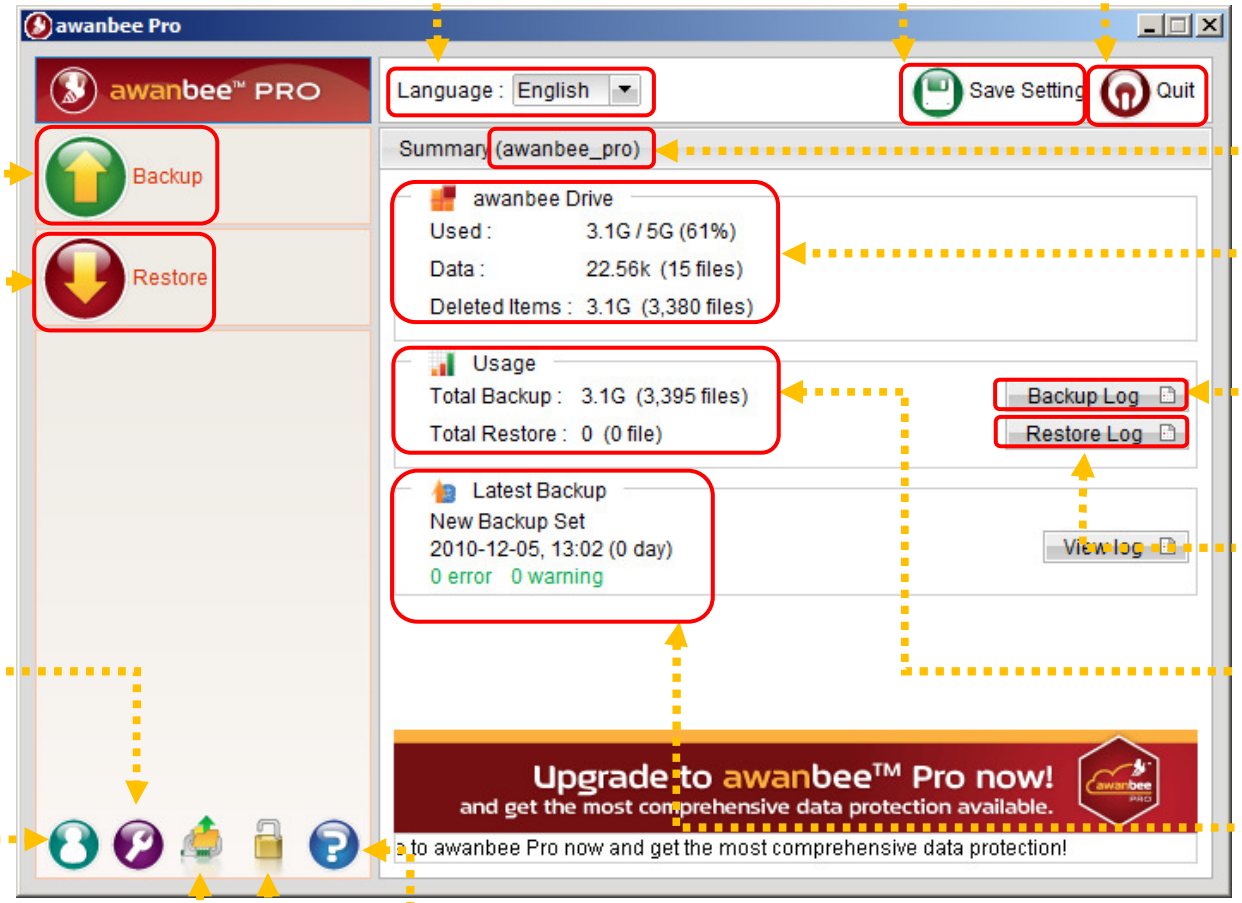
Quit awanbee™ Pro . You will be given the option to save all your settings to the awanbee™ Data Protection Server

To start the Backup process. The files and folders to be backed should already have been identified

To Restore backed up files. At least a single backup session should have been completed for the Restore function to

Set/modify awanbee™ Pro settings

Update your information, i.e. password, email address, time zone



Your login name

A summary of the backup contained on your awanbee™ Drive

View all activities that had taken place during the Backup process

View all activities that had taken place during the Restore process

Statistics of the backup and restore processes that have taken place

Information on the most recent backup set

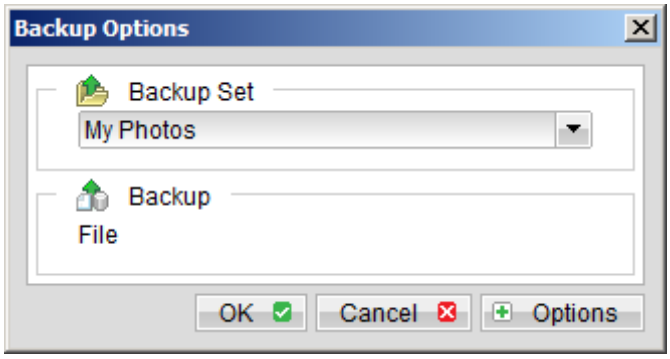
Decrypt local copy wizard

Decrypt File Wizard

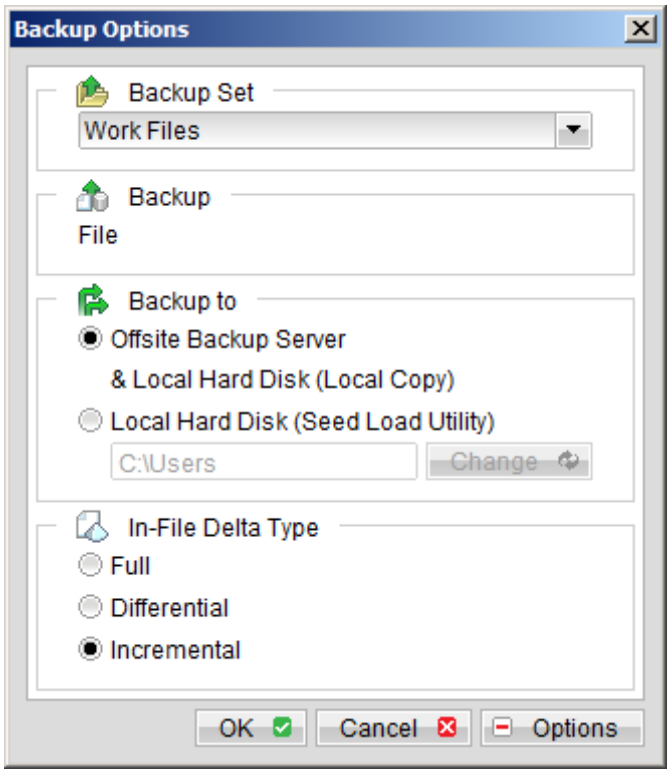
About awanbee™ Pro - you can get information on the release version, support email address, and the name of the awanbee™ Data Protection Server your client is connected to

4.1 Backup button

The 'Backup' button, , allows you to manually start the backup process. First of all you will be asked to select the backup set that is to be backed up (see Section 4.6.1.1 on how to create a backup set).



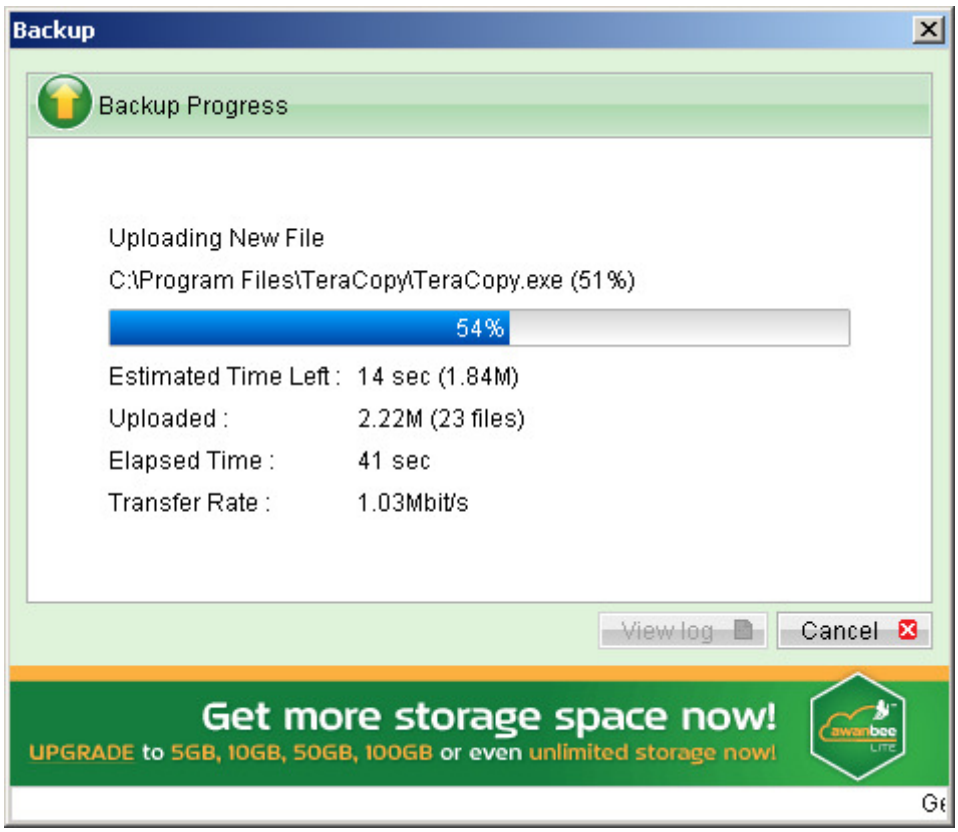
Select the backup set from the drop down menu. For additional options, please click on the 'Options' button. The following window shows the additional options available for File backups. Other backup types, i.e. MS Exchange Server, Lotus Domino Server, MS SQL will have a different set of options.



You can select to backup to the awanbee™ Data Protection Server (Offsite Backup Server') and, if enabled via the instructions in Section 4.6.12, to your local hard disk. If the amount of data to be backed up is huge, you may want to backup to a removable hard disk ('Local Hard Disk – seed Load Utility') and then send it over to awanbee™'s Data Centre via courier (please contact support@awanbee.com for more detail on Terms and Conditions).

For the backup type, you have three options when backing up to awanbee™ Data Protection Server: full, differential or incremental. Please see Section 4.6.7 for more details on the difference between these three. When you are creating a 'Seed Load' you have to carry out a full backup.

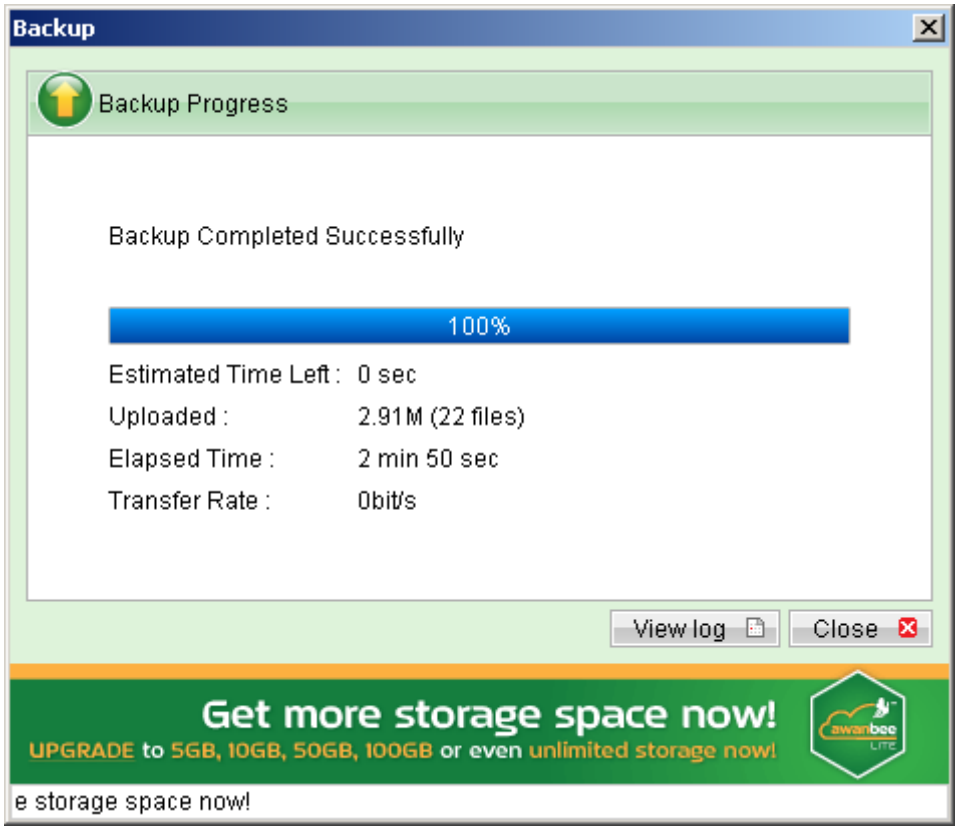
Clicking the 'OK' button will start the manual backup:



This window will show you the progress of the backup process. If at any point of time you would like to cancel the backup process, please press the 'Cancel' button. The backup duration will depend on a number of factors: the size of the files and folders that are to be backed up, how many backups of the same files and folders have taken place previously and the speed of the Internet connection.

Once the backup is completed, you'll be notified and given the option to view the log file. By clicking on the 'View log' button, which will provide a detailed look at all the activities that had taken place during the backup process. The same log file can be viewed from the main awanbee™ Pro window.

Click the 'Close' button to return to the main awanbee™ Pro window.

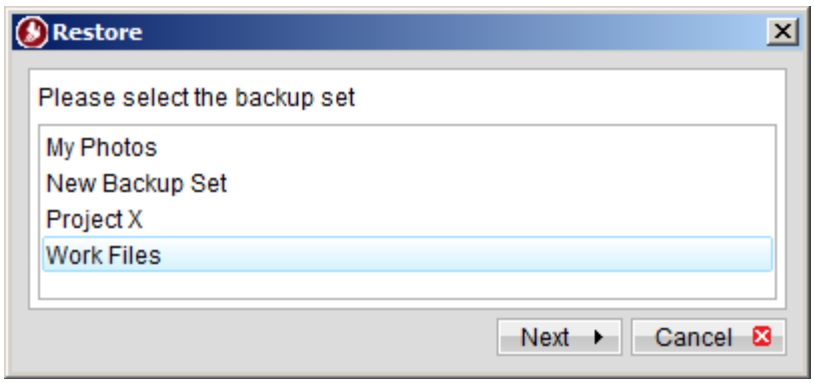

Backup
Backup Progress
Backup Completed Successfully
100%
Estimated Time Left : 0 sec
Uploaded : 2.91M (22 files)
Elapsed Time : 2 min 50 sec
Transfer Rate : 0bit/s
View log
Close
Get more storage space now!
UPGRADE to 5GB, 10GB, 50GB, 100GB or even unlimited storage now!
e storage space now!

Please note that if you had identified a scheduled backup earlier, clicking on the 'Backup' button will update the existing backup set. Your scheduled backup will still continue to run thus ensuring that your data is continuously protected.

4.2 Restore button

The 'Restore' button, , allows you to restore files and folders backed up on either the awanbee™ Data Protection Server or your local hard disk (if any). In order for the restore process to work, there must be at least a single backup carried out successfully and completed previously.

First of all you will be asked to select the backup set that needs to be restored:



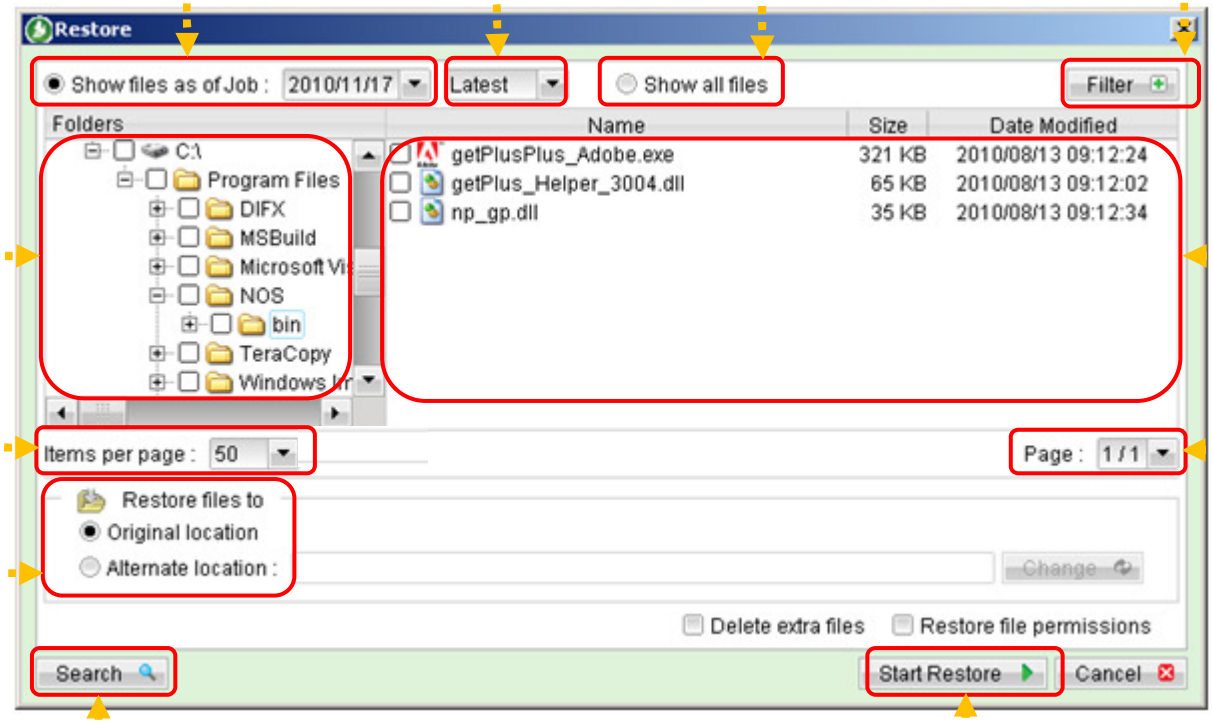
awanbee™ Pro: Restore Window

File and folders backed up as far back as 14 days ago can be restored

If Continuous Data Protection is enabled, you will be able to restore all versions of the files/folders that have changed in the past 24 hours

Show every single file and folder that has been backed up the past 14 days. This includes files and folders that have been deleted.

Apply filters to pick and choose specific file and folder to be restored



Folder selection window – click on the check box to select a folder (and all its child folders) for restoration

File selection window – click on the check box next to a file to select it for restoration

Set the limit on the number of files and folders displayed per 'page'

If the list of files displayed in the File Selection Window is too long, you can view it via multiple 'pages'

Identify location where the files and folders should be restored to. They can either be restored back to their original location or you can state an alternate location

Search for specific files and folders

Start the restore process

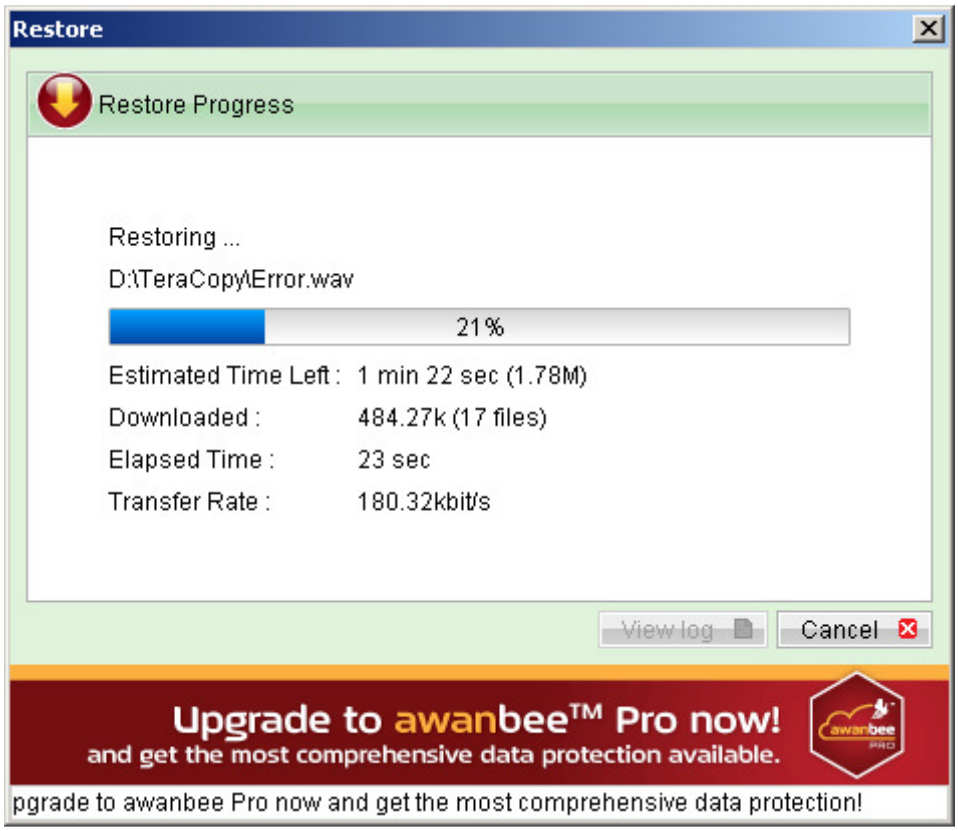
Start off by selecting the files and folders backed up by date. You have two options:

- You can select the files and folders backed up on a certain date ('Show files as Job' option). If you have Continuous Data Protection enabled (Section 4.6.6), you can then fine-tune the selection to a specific time within the selected day (drop-down menu next to 'Show files as Job') OR
- You can view all the files and folders that have been backed up, including those files/folders that have been deleted, moved, etc from your computer ('Show all files' option).

For further refinement, you can use filters to choose specific files/folders by using the 'Filter' button (located at the top right) or if you're unsure of the location of the file/folder that you will like to restore, you can use the 'Search' button on the lower left.

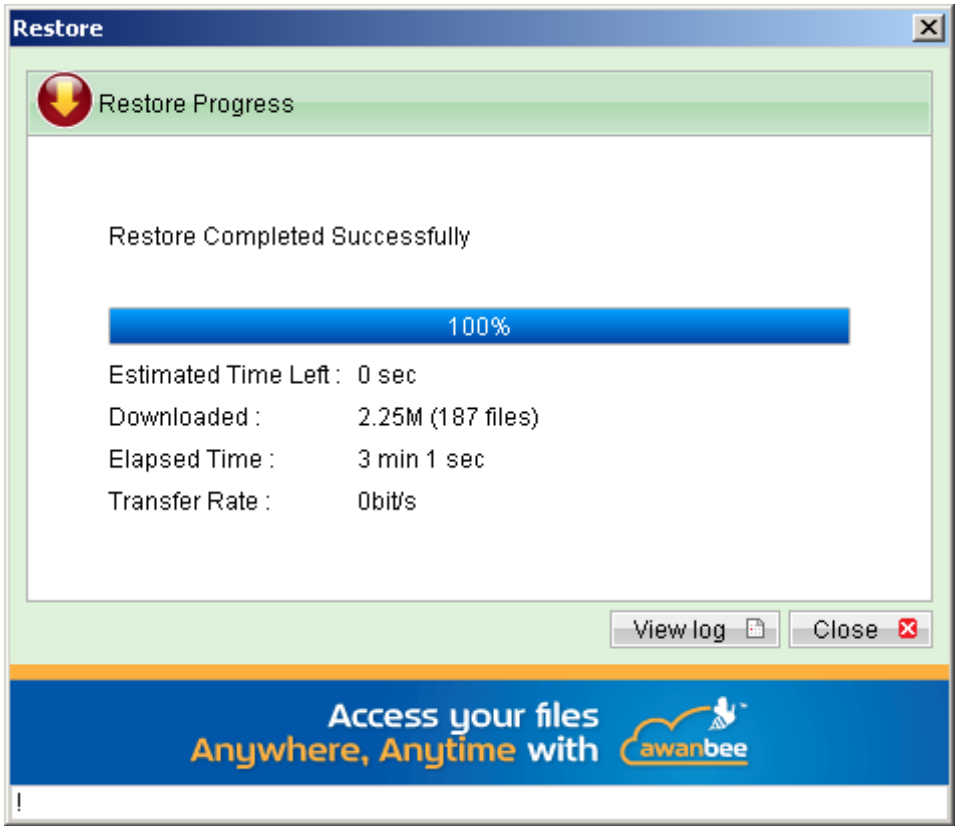
You can also identify the location where the files/folders are to be restored – it can be either at the original location from where it was backed up from or to a totally new location.

Once the required files that are to be restored have been identified, clicking on the 'Start Restore' button will initiate the restoration process:


Restore
Restore Progress
Restoring ...
D:\TeraCopy\Error.wav
21%
Estimated Time Left : 1 min 22 sec (1.78M)
Downloaded : 484.27k (17 files)
Elapsed Time : 23 sec
Transfer Rate : 180.32kbit/s
View log
Cancel
Upgrade to awanbee™ Pro now!
and get the most comprehensive data protection available.
pgrade to awanbee Pro now and get the most comprehensive data protection!

The Restore Progress window will provide you with information such as the names of the files and folders being restored, a restoration progress bar, estimated time remaining, time taken so far, as well as the transfer rate.

Once the files/folders have been restored, you can view the log file for details of the restoration process. Click on the 'Close' button to close this window.



This will take you back to the Restore window. Click on the 'Close' button to exit and get back to the main awanbee™ Pro window.

4.3 Save Setting button

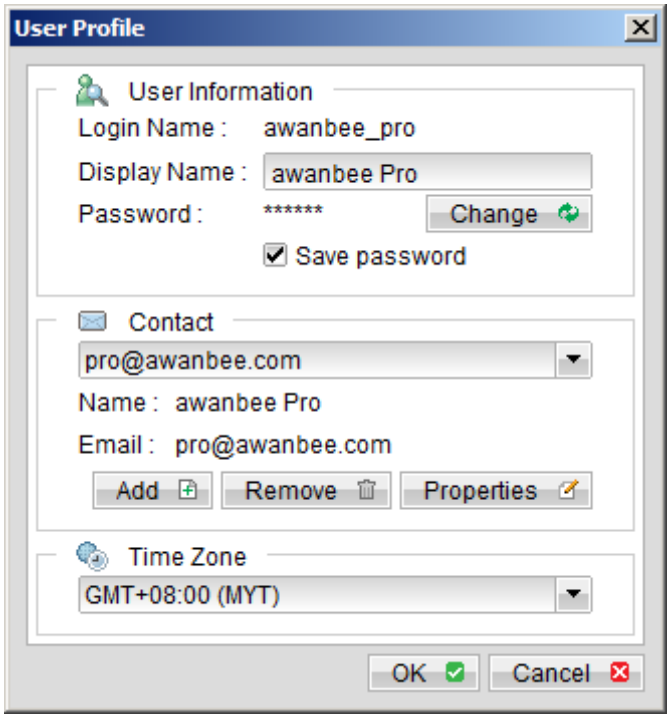
The 'Save Setting' button, , will save all your settings and profile information on the awanbee™ Data Protection Server. The next time you login to awanbee™ Pro, all these details will be retrieved from the awanbee™ Data Protection Server. The reason they are stored on the awanbee™ Data Protection Server is to ensure that your settings and profile information can be retrieved unharmed, in the case your computer crashes or loses all its data,. Using this information, the restore process can be carried out successfully.

4.4 Quit button

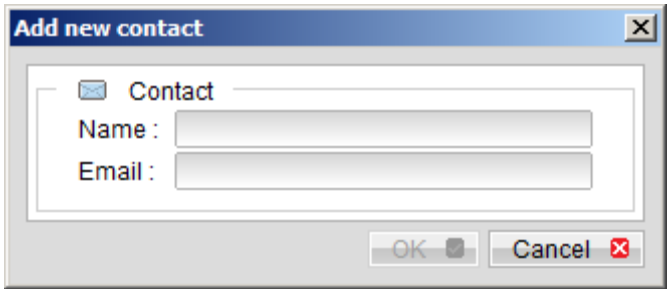
The 'Quit' button, , will close the main awanbee™ Pro window. But please note that the awanbee™ Pro application is always running in the background in order to give you continuous protection – this can be confirmed by the awanbee™ Pro icon on your System Tray:

4.5 User Profile button

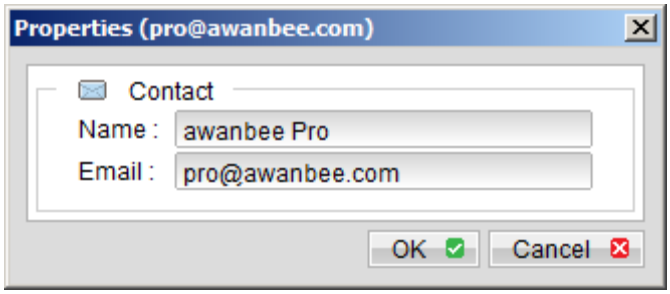
The 'User Profile' button, , allows you to set/change details such as password, name, email address and time zone.



It is possible to have multiple contact details for a single user. You can add a new contact detail by clicking on the 'Add' button:



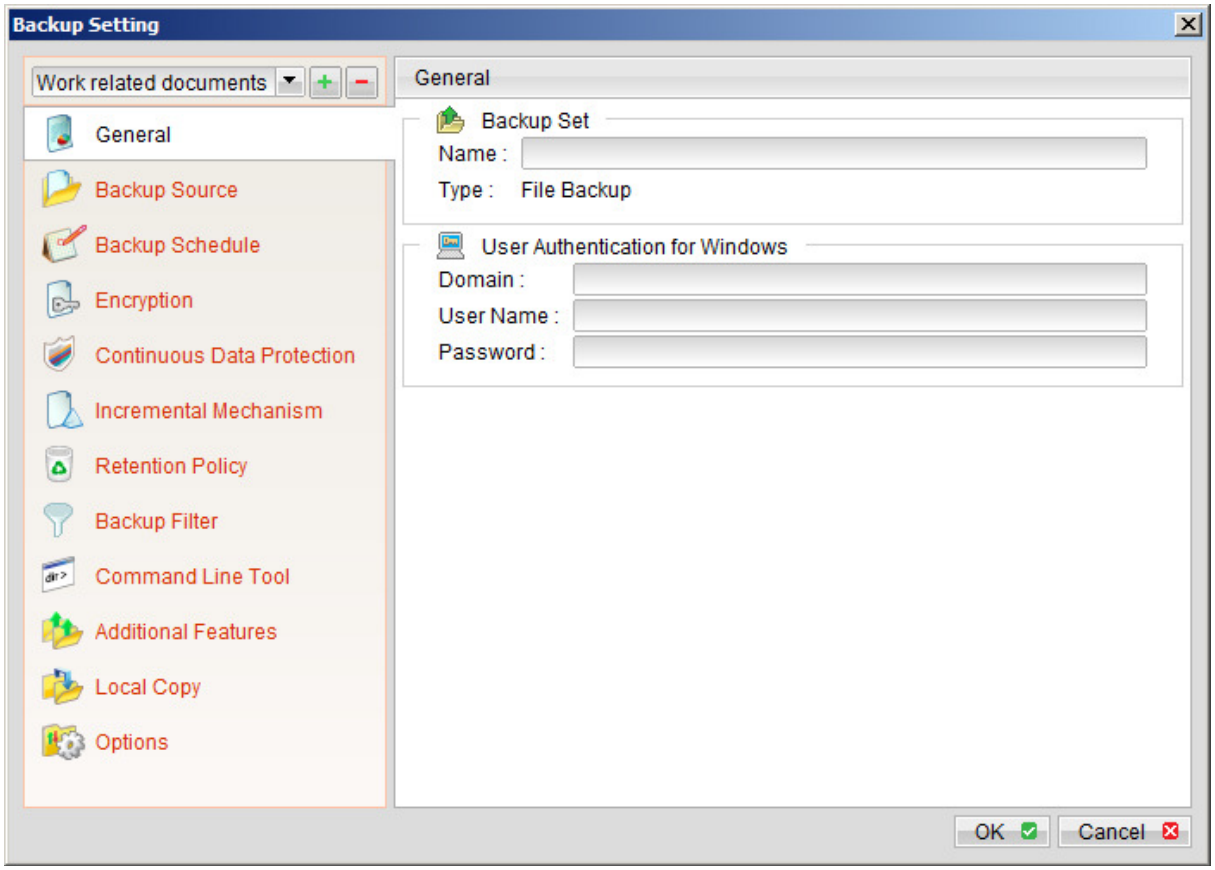
If you need to edit a contact, select it from the drop-down menu and click on the 'Properties' button:



In case you need to remove one of the contact points, select it from the drop-down menu and click on the 'Remove' button.

4.6 Backup Setting button

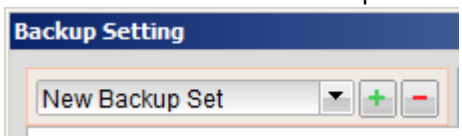
The Backup Setting button, , allows you to manage your backup in minute detail.



4.6.1 Managing Backup Sets

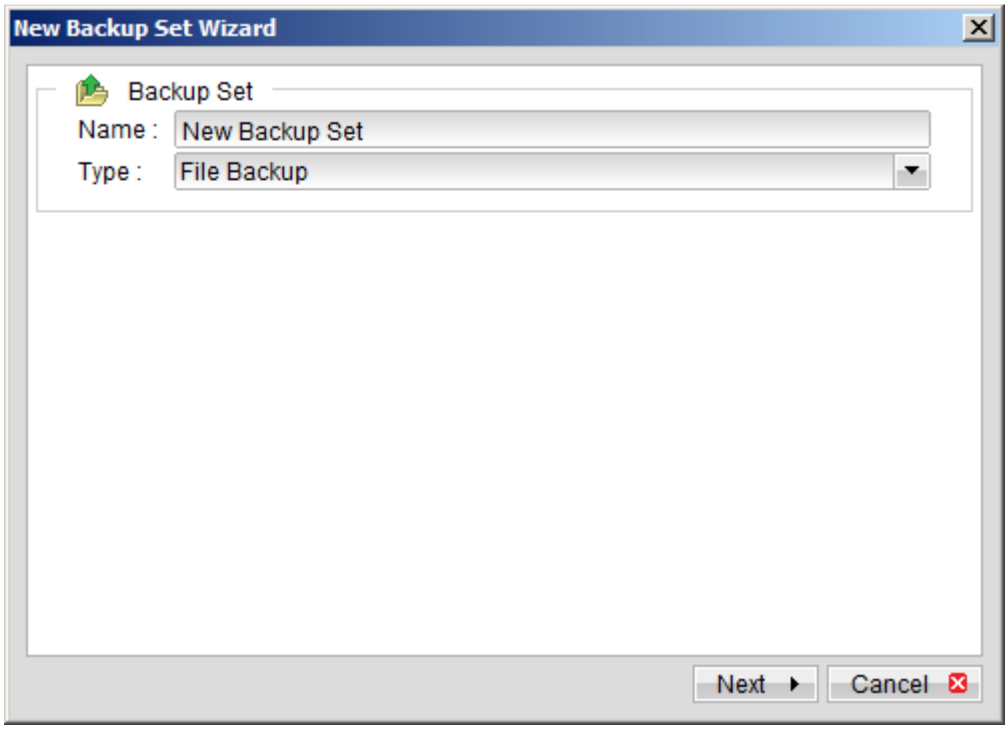
A backup set contains all the details of a backup. awanbee™ Pro users can have multiple backup sets under their account. The backup sets are mutulally exclusive, i.e. independent of each other. For example you can have one backup set backing up all your personal files every Sunday night while having another set backing up wour work related files on a daily basis.

The menu to handle the backup sets can be found at the top left:



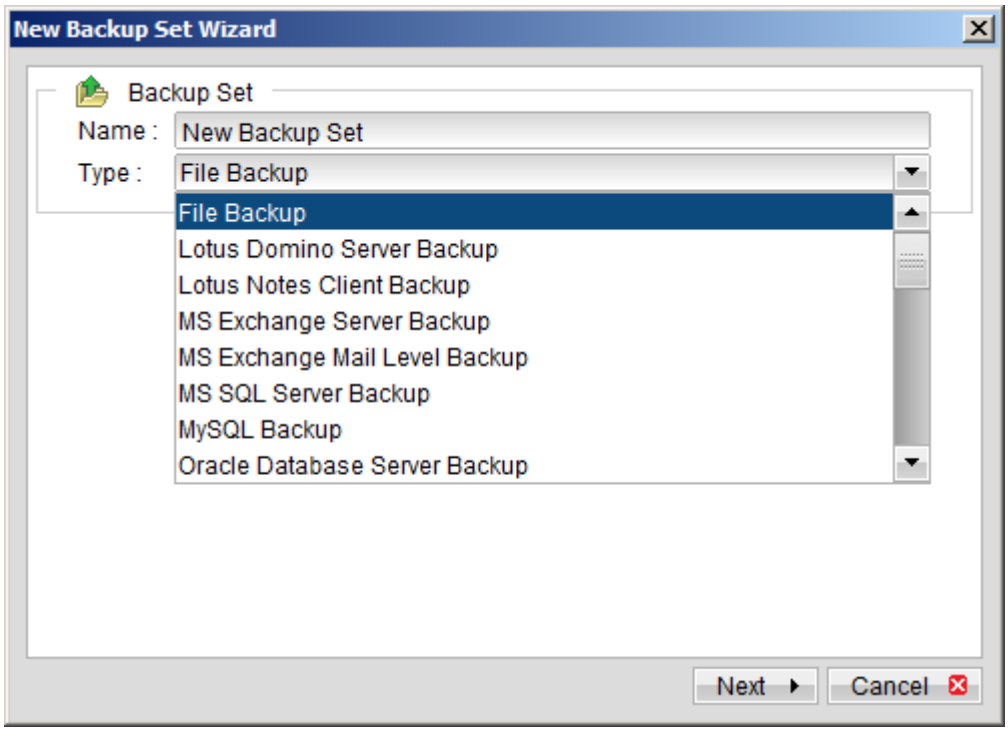
4.6.1.1 Creating a new Backup Set

To create a new Backup Set, click on the icon:



You will be asked to give a name to the backup set. Please feel free to describe the backup set as clearly as possible so that it will be easy for you to differentiate it from among all the other sets that are going to be created/already created.

The Backup Set Type lets you state the type of backup set.



The following are the types available, along with a brief description for each:

Backup Set type	Description
File	Your typical files and directories
Lotus Domino Server	Lotus Domino Server related files
Lotus Notes Client	Lotus Note Client related files
MS Exchange Server	Microsoft Exchange Server 2000 / 2003 / 2007
MS Exchange Mail Level	MS Exchange mail account e-mail, contacts, calendars, tasks etc from Microsoft Exchange Server 2000 / 2003 /2007
MS SQL Server	Microsoft SQL Server 7.0 / 2000 / 2005
MySQL Server	MySQL Server
Oracle Database Server	Oracle 8i/9i/10g database
System State	Microsoft Window's System State
Shadow Protect	Microsoft Windows System (backed up using ShadowProtect)
MS Windows System	Microsoft Windows Server system (only works with Microsoft Windows Vista Business/Enterprise/Ultimate Edition and Windows Server 2008).

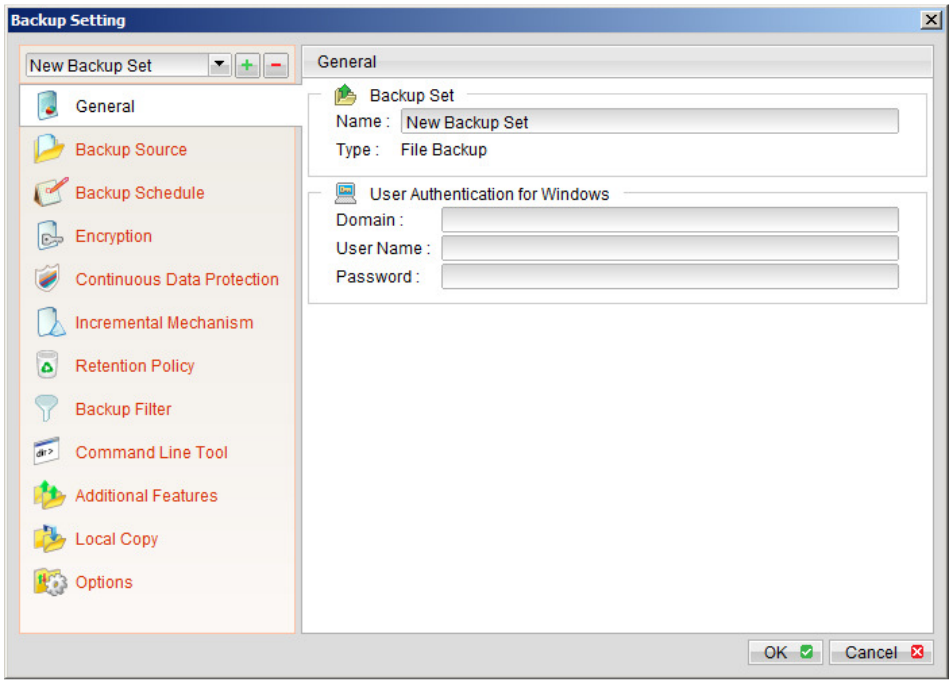
Based on your requirement for this backup set, please select a type and then press 'Next'. Depending on the type, the subsequent instructions will be specific to each type.

4.6.1.2 Removing a Backup Set

A backup set can be removed by selecting it from the drop-down menu and clicking on the button.

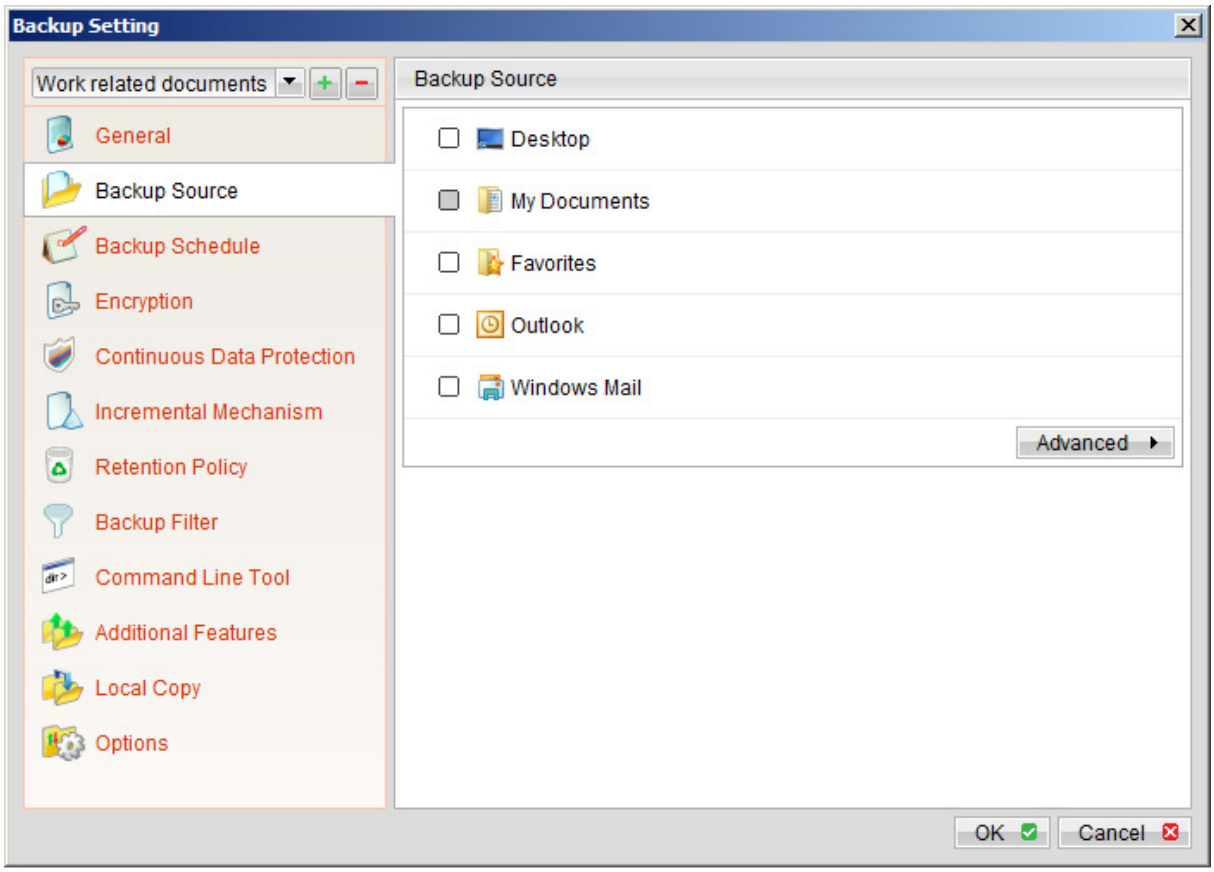
4.6.2 General

The General option gives you an overview of the details of the currently selected Backup Set, i.e. name, type.

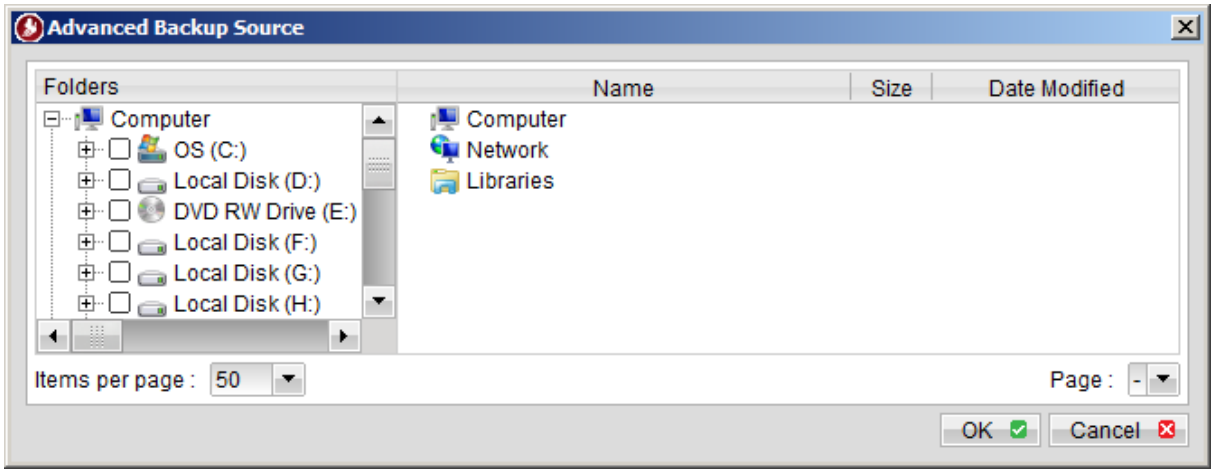


4.6.3 Backup Source

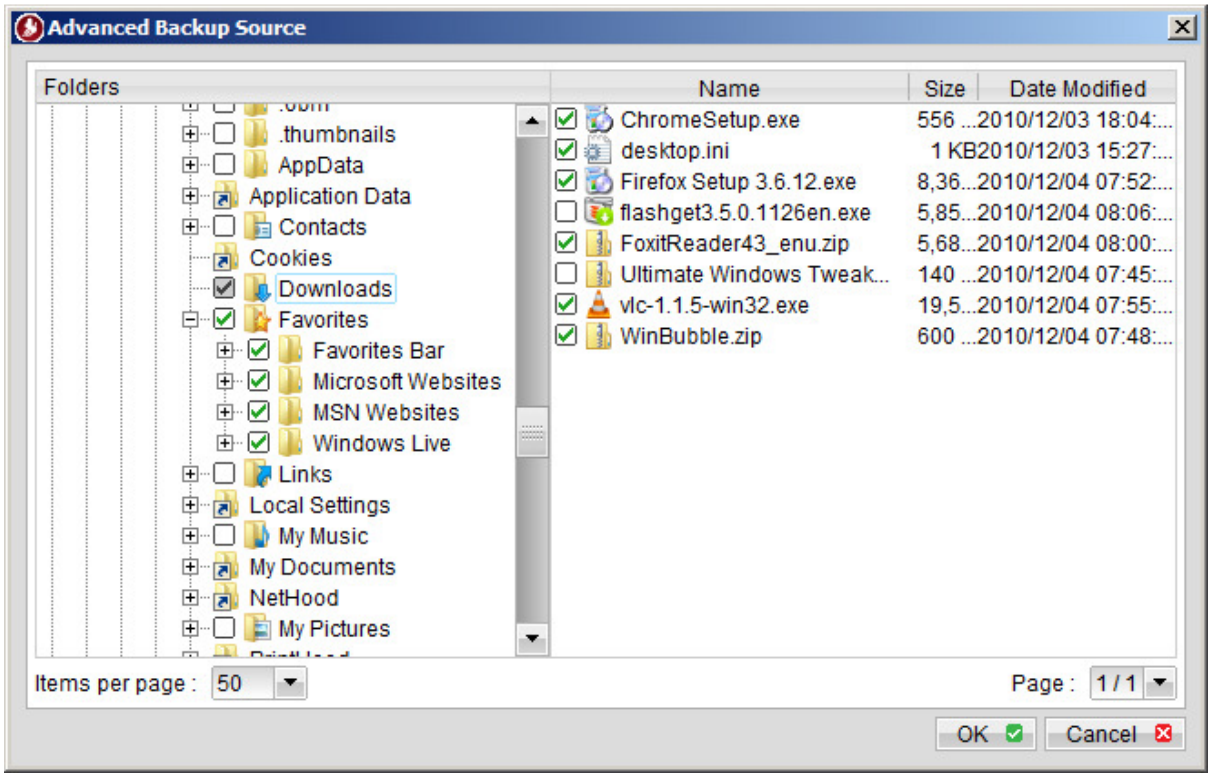
The Backup Source option allows you to identify the backup sources, i.e. files and folders that need to be backed up. This option window lists out the most common locations where users keep their data, i.e. the Desktop, My Documents folder, Internet Explorer's Favorites, Microsoft Outlook email client. However, if you would like to backup files found elsewhere on your computer or you only want to backup certain files/folder, click on the 'Advanced' button on the lower right. (For even more fine-level selection, please see 'Backup Filter' option in Section 4.6.9)



You will get a new window which will allow you to select specific folders and files located on your computer:



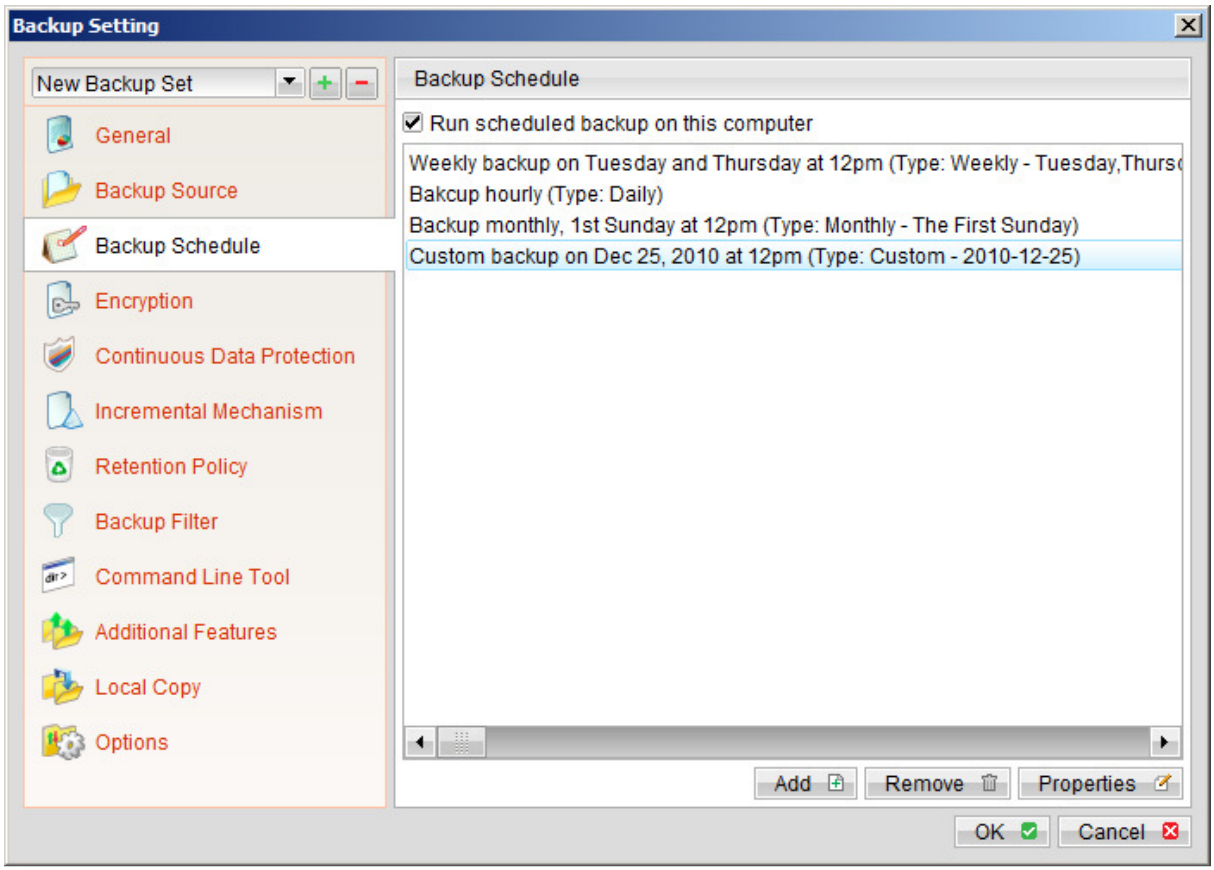
If you would like to backup a whole hard disk, just click on the check box next to the drive's name. If you would like to backup a specific folder, expand the tree by clicking on the '+' symbol and then click on the related check box next to the folder's name. The same method is applied when you would like to select specific files to backup - just click on the check box next to the file:



Once you are done selecting the files and folders, click on the 'OK' button to go back.

4.6.4 Backup Schedule

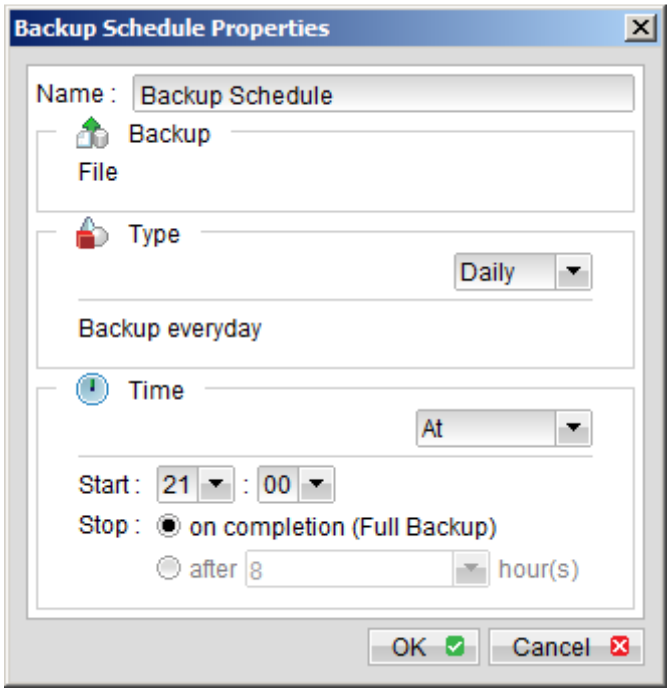
The Backup Schedule option lets you define the schedule to run the currently selected backup set.



When you have multiple backup sets, you may want to disable a certain backup set from being backed up – you can do so by un-checking the 'Run scheduled backup on this computer' checkbox at the top.

For each back-up set, you are allowed to create multiple backup schedules, i.e. you can run the backup more than once every day/week/month. You can add a schedule by clicking on the 'Add' button and remove it via the 'Remove' button.

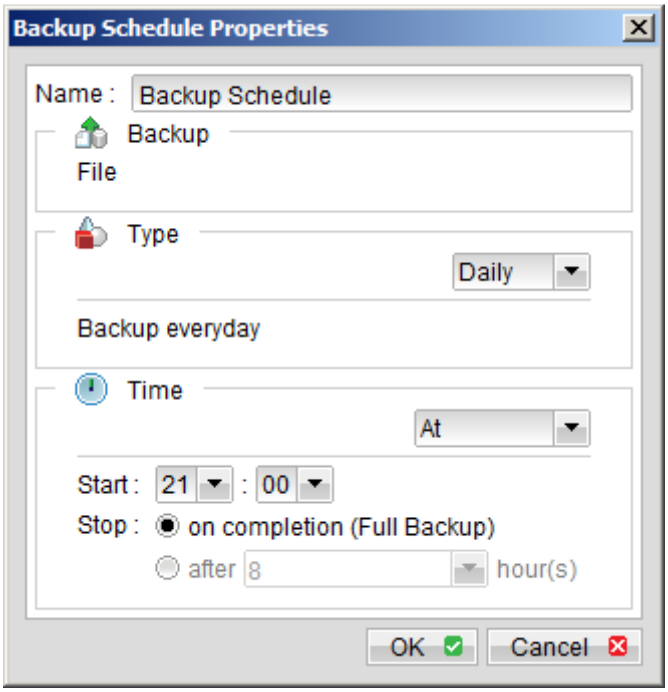
The default backup schedule is a single backup carried out at 9:00pm daily. If you would like to edit a selected backup schedule, click on the 'Properties' button.



You can give a name for a schedule at the 'Name' text box. The backup set type is given in the 'Backup' section of the window. For the backup type, you have the following option via the drop down-box: Daily, Weekly, Monthly and Custom.

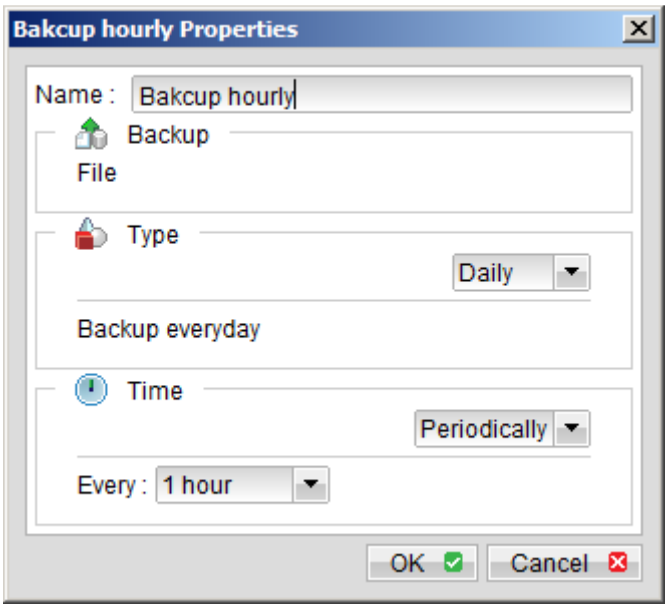
Daily Backup - The daily backup can be carried out via two possible timings:

- **At** a specific time each day. You specify the time on which the backup should start ('Start'). Please note that the time is stated in the 24-hour format, i.e. 13:00 is 1:00pm, 20:00 is 8:00pm. You are also allowed to specify when the backup should stop ('Stop'). Ideally, it should only stop when all the files and folders identified have been backed up ('on completion'). However, there may be a need to end the backup process after certain number of hours. For this instance, state the total number of hours the backup process should run before it is stopped. The maximum number of hours you can set is 24 while the minimum is only 1 hour.

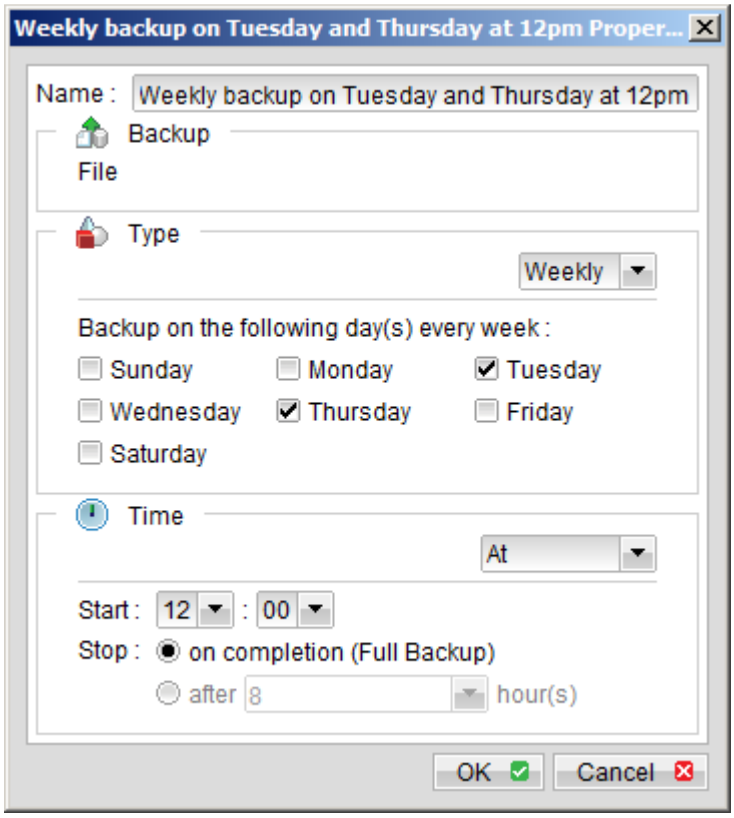


- **Periodically**. You can have the backup process run every:
  - 1, 2, 3, 4, 5, 6, 10, 12, 20, 30 minutes or
  - 1, 2, 3, 4, 6, 8, 12 hours

  Please note that while running periodical backups on large, dynamic backup sets using a short period, i.e. a few minutes, may cause severe strain on your computer. Due to the large size of the incremental changes, the time required to send the data over to the awanbee™ Data Protection Server may take longer than the set period. As such, there will be a backlog of backup processes and may overwhelm your computer. So, please make sure that the period chosen commensurates with the size of the backup set.



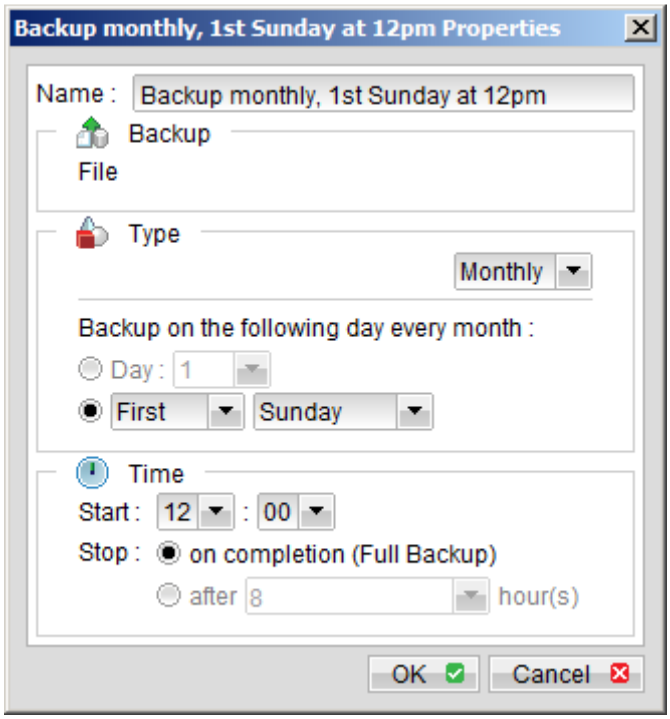
Weekly - For a weekly backup, you can identify the day(s) in the week on which the backup process should run. You can select any day of the week, in any combination, i.e. Tuesdays and Thursday, by putting a check mark on the respective boxes.



As with the Daily backup, the actual time of the day for the backup process to begin can be set to a specific point of time or run on a periodical basis.

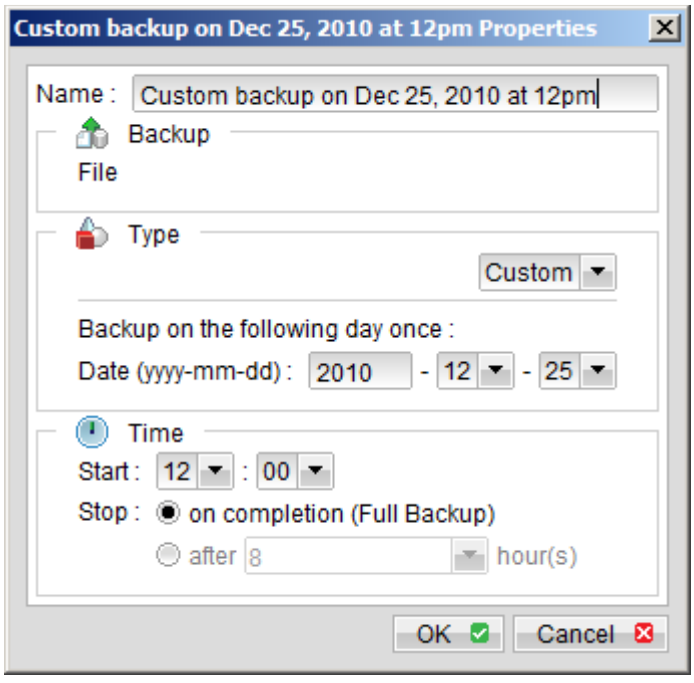
Monthly - There are two options in which the Monthly backup can be run:

- Selecting a day in the month, with the possible values between 1 and 31
- Selecting a certain day of the week, i.e. first Sunday, third Thursday, last Friday



The actual time of the day for the backup process to begin can be set to a specific point of time ('Start') and you are also allowed to specify when the backup should stop ('Stop').

Custom - A Custom backup schedule lets you identify a specific day in the year for the backup process to run. The format of the date is YYYY-MM-DD:

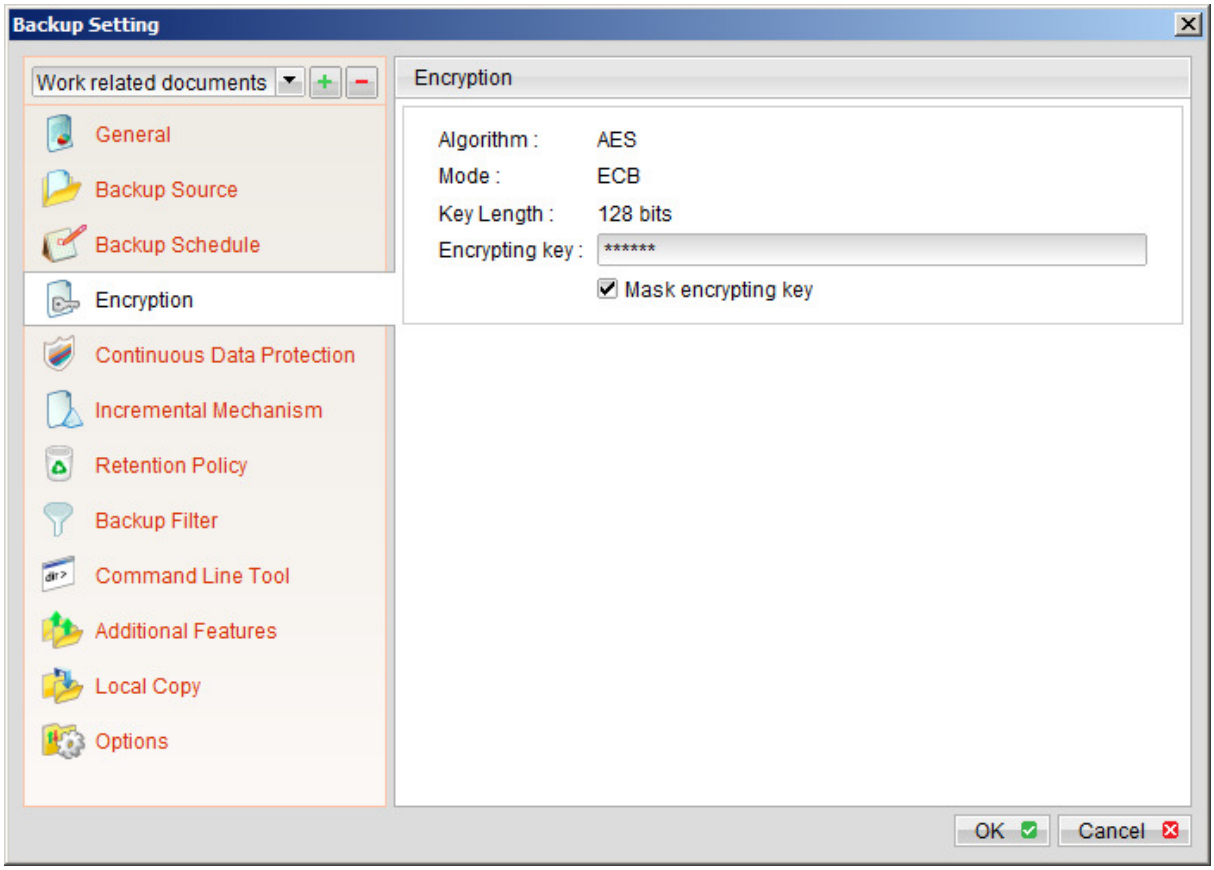


The actual time of the day for the backup process to begin can be set to a specific point of time ('Start') and you are also allowed to specify when the backup should stop ('Stop').

4.6.5 Encryption

Before your files and folders are transferred to the awanbee™ Data Protection Server, they are compressed and encrypted. This will ensure the data that is transmitted from your computer over the cloud to the awanbee™ Data Protection server, is almost unreadable by anyone who is monitoring your network. The encrypting key is also used to decrypt the data during the Restore process.

The Encryption menu shows the encryption used to encrypt your data before it is sent over to the awanbee™ Data Protection Server.



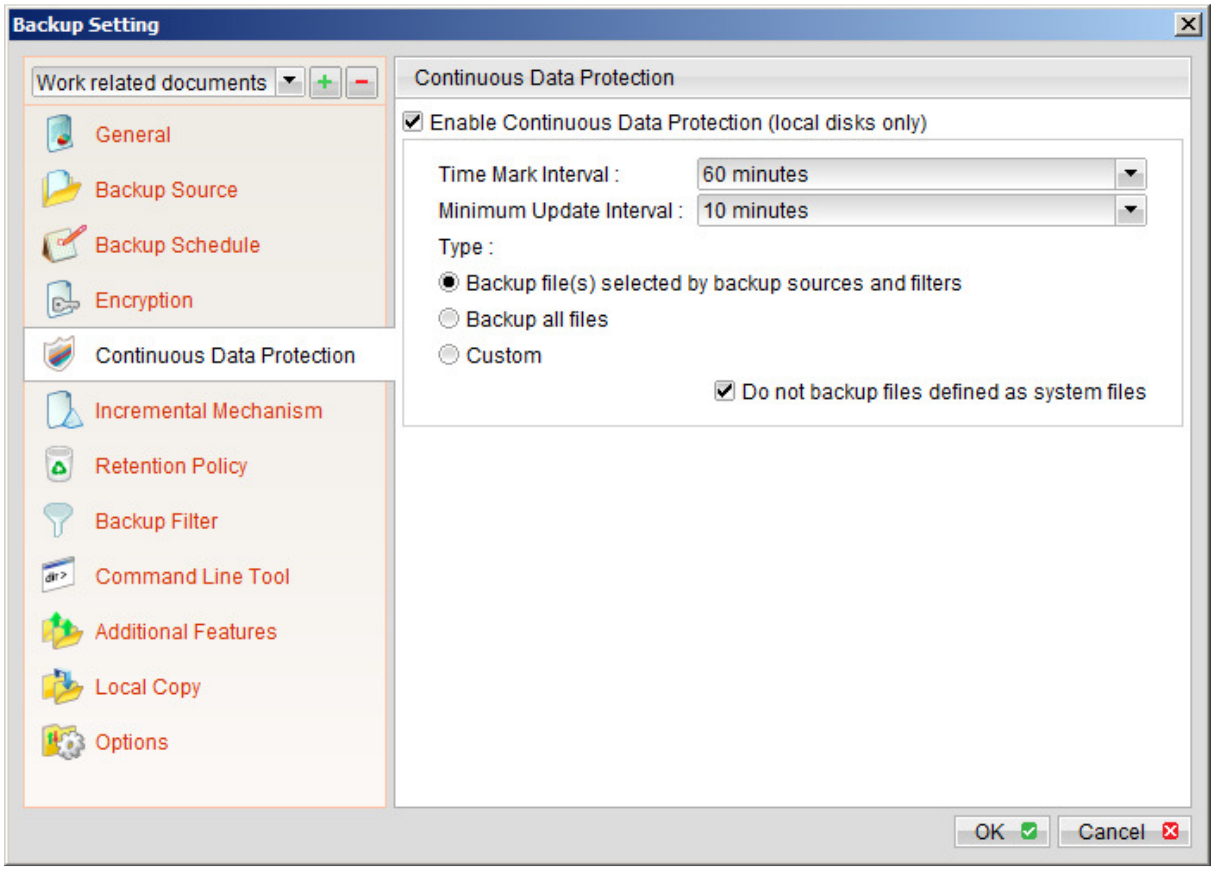
The default encryption algorithm is 'Advanced Encryption Standard' (AES) and encrypting mode is 'Electronic Cook Book' (ECB). The key length is set at 128 bits and it is equal to the password used to login to the awanbee™ Data Protection Server.

4.6.6 Continuous Data Protection

The 'Continuous Data Protection' (CDP) function gives you the option of backing up your files automatically every time there is a change made to it.

The benefits of CDP are:

- All changes to your data are backed up continuously throughout the day and, as such, no data is skipped from being backed up.
- CDP will backup every single file and folder on your local hard disk that undergoes a change, even those that had NOT been identified in the Backup Source section



While the CDP is a useful feature, please note that it requires quite a bit of memory and CPU resources – it may impact the performance of your computer.

Enable CDP by clicking on the checkbox next to 'Enable Continuous Data Protection'. Please note that the CDP option only works with files and folders located on your local hard disk. As such, data located on network drives, removable storage, etc will not be backed up.

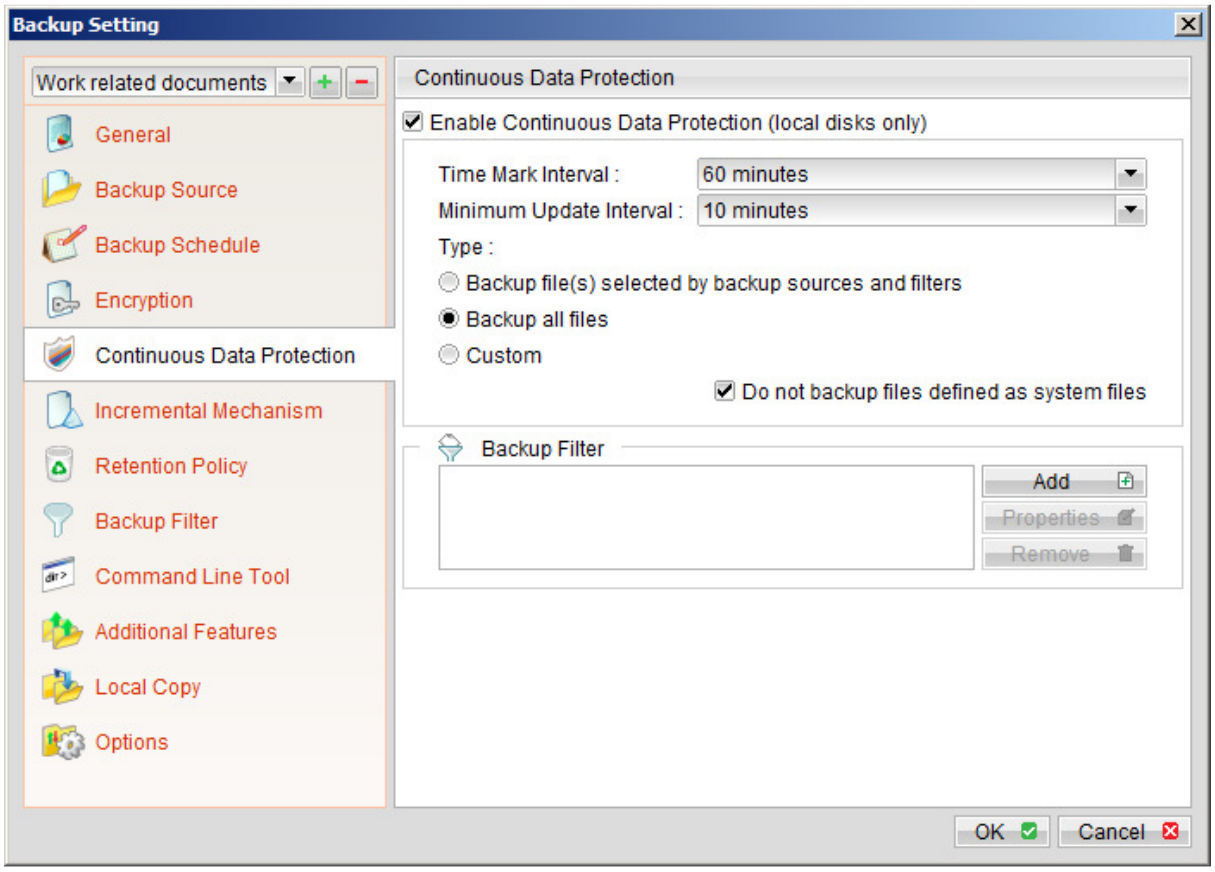
The 'Time Mark Interval' option allows you to define the time interval between subsequent CDP snapshots. If, for example, the interval is set at 30 minutes, the CDP will check for changes in all your files and folders every 30 minutes. During the Restoration process, when you are asked to select at which point in time you will like to restore your data from, you will be given the following options: 00:00, 00:30, 01:00, 01:30, etc. the interval options are 5, 10, 20, 30 and 60 minutes.

The 'Minimum Update Interval' option lets you define the minimum interval that repeatedly updated files are backed up again. If you would like to ensure that the CDP captures every single change, then select 'Always' from the drop down menu. However, please note that only the last backup carried out as defined by the 'Time Mark Interval' option is actually restorable. Please note that this option only applies to full file backup only and not for files that are backed up incrementally by in-file delta (See section 4.6.7).

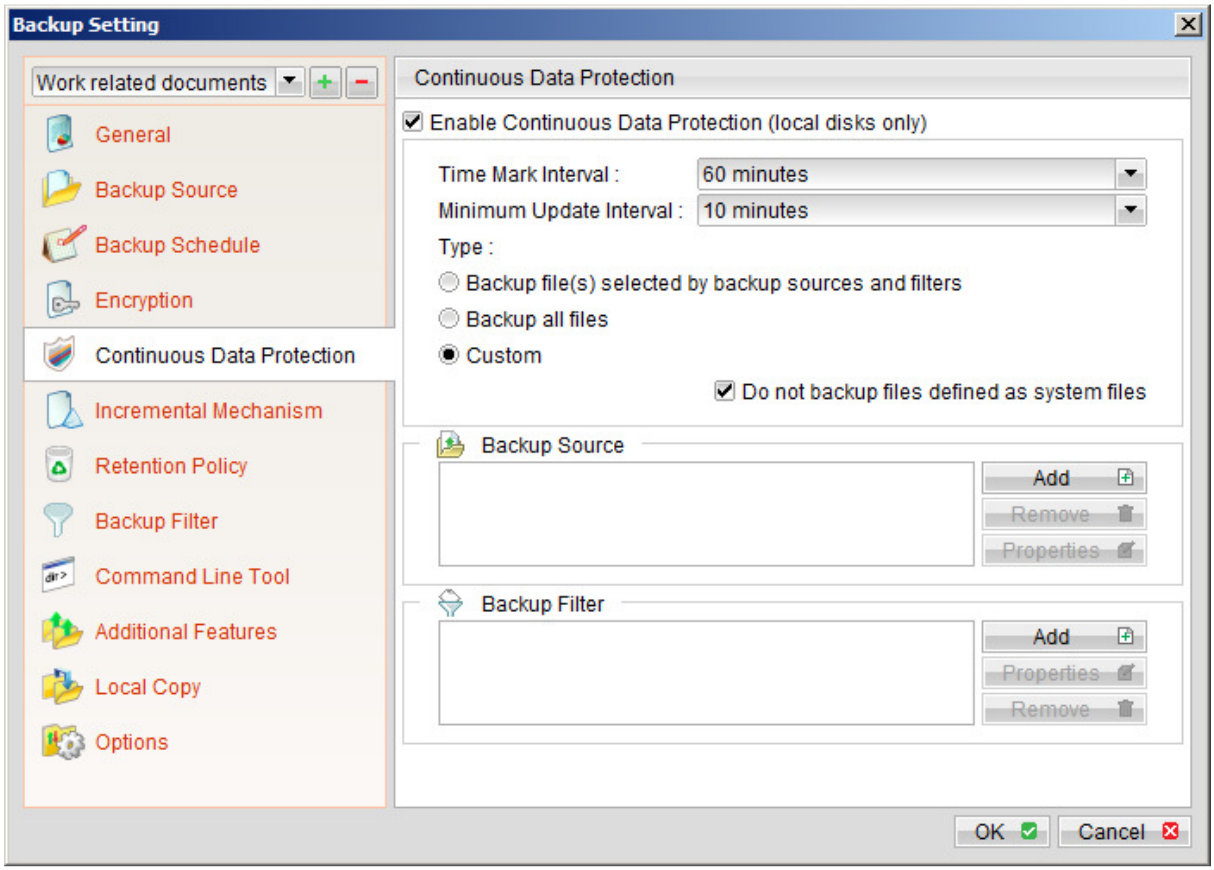
You have three options in terms of the files and folders that will be tracked by the CDP:

- Only files and folders that have been selected via the 'Backup Source' option and filters ('Backup file(s) selected by backup sources and filters')

- Backup all files - this option backs up your files and folders even though they have not been identified in the 'Backup Source' option or via the filters; as such, any file that you make changes to will be backed up automatically by the awanbee™ Pro client. The awanbee™ Pro client manages to do this by tracking all the changes that takes place on your local drive. You also have the choice of defining one or more Backup Filters to filter the files and folders that are to be backed up. Please see Section 4.6.8 for full details on how to use the filters.



- Custom – you can specify the files and folders that are to be tracked by CDP. All others are ignored. You will have to add each individual file and folder that is to be tracked by the CDP by clicking on the 'Add' button. You also have the choice of defining one or more Backup Filters to filter the files and folders that are to be backed up. Please see Section 4.6.8 for full details on how to use the filters.

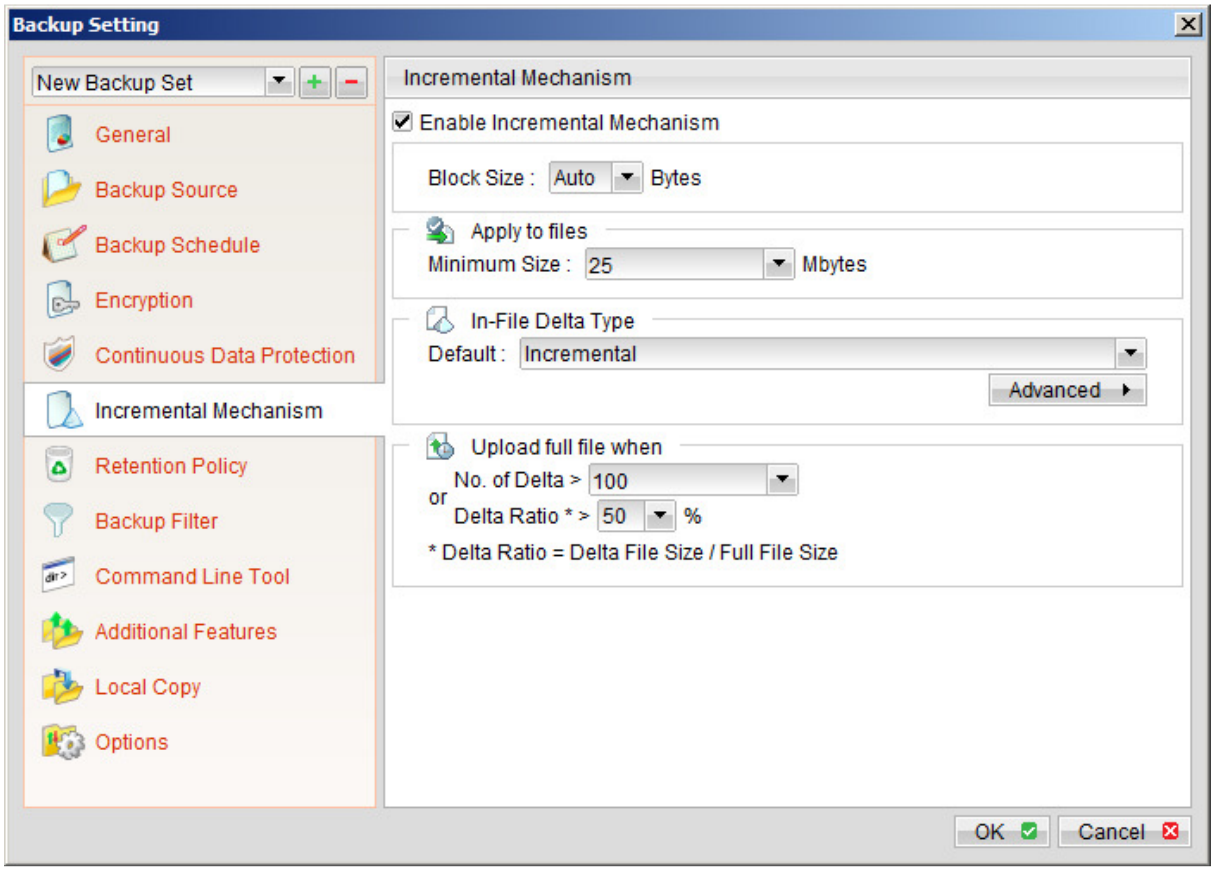


When selecting any of these three options, you have the choice to ignore backing up system-related files ('Do not backup files defined as system files' checkbox). Examples of system-related files are those found in the Windows installation folder (e.g. C:\Windows), Program Files folder (e.g. C:\Program Files), temporary files and Internet caches.

4.6.7 Incremental Mechanism

The 'Incremental Mechanism' option is a powerful one where only changes within a file are backed up so as to reduce the time required for the backup process. For example, if you happen to have a 5GB database file that needs to be backed up daily, rather than uploading the whole 5GB every day, you can choose to just upload the changes that have taken place over the course of 24 hours. While the first backup will involve the uploading of the whole 5GB file, the subsequent backups will only send over the changes that had taken place within the database file. Using an intelligent algorithm, a comparison is done with the current file with the version of the file backed up on the awanbee™ Data Protection Server. Only the difference, the delta, between the two is then backed up.

To take advantage of this feature, put a check on the 'Enable Incremental Mechanism' checkbox.



The block size sets the size of block used to carry out the comparison between the current file and the last backed up version. The smaller the size, the chances of matching is higher. However, the processing requirement is higher as the awanbee™ Pro client has to carry many such comparisons. Choosing a bigger block size will result in a faster backup but however the amount of data transmitted (i.e. the changes – the delta) will be higher due to the large block size. If you are unsure of which size to choose, please use the 'Auto' option and the awanbee™ Pro client will select the most suitable size based on your backup set and your system's specification.

The minimum file size for the incremental mechanism to be applied upon is set in the 'Apply to files' section. Files smaller than the stated amount will be fully backed up. Only files bigger than the given figure will undergo the incremental processing and just the changes, delta, will be uploaded to the awanbee™ Data Protection Server.

There are two algorithms used to construct the delta: incremental and differential. The Incremental method will generate the delta by comparing the current file with the most recent backed up full file (for the first backup) **or** the most recent delta (for subsequent backups) on the awanbee™ Data Protection Server. The delta produced will be small and will require very little bandwidth. As such the backup process can be done quickly. However, when the file has to be restored, the most recent full file backup plus all the incremental deltas generated will be required to reconstruct back the latest version of the file. This will cause the restoration process to take longer and require more processing power.

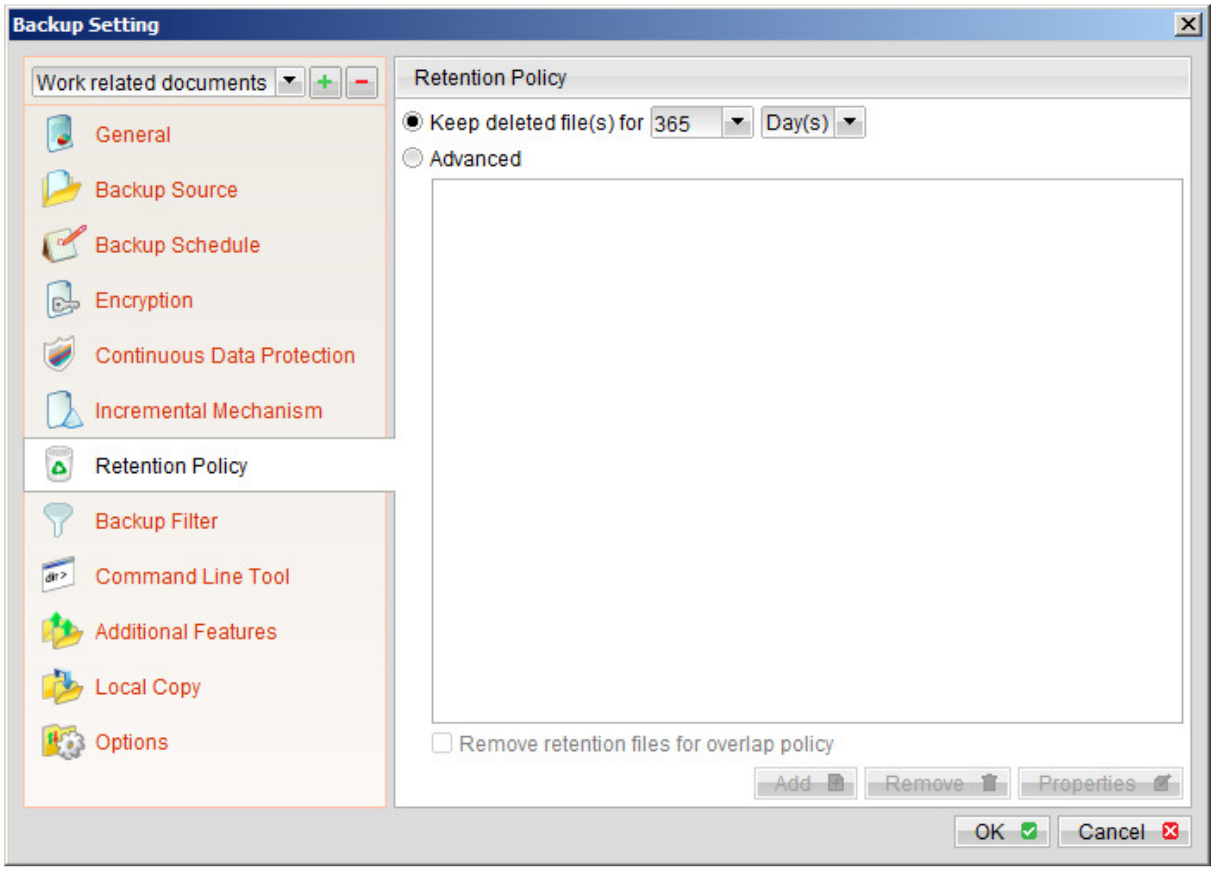
The Differential method generates the delta by only comparing the current file with the latest backed up full file on the awanbee™ Data Protection Server. As such, the delta will continue to grow in size for each subsequent backup. This will result in the backup process getting longer each time as the delta file keeps growing in size. However, the advantage of this method is that the restoration process is very fast as only the most recent full file backup plus the most recent delta is required to reconstruct back the latest version of the file.

In order not to depend fully on the deltas alone to backup the files, it is prudent to carry out a full file backup on a regular basis. The 'Upload full file when' section lets you define when a full backup of the files need to be carried out. The condition can be set via:

- a minimum number of deltas generated thus far ('No. of Delta'). If, for example, the condition used is 'No. of Delta > 100', a full file backup will be carried out after 100 deltas have been created. After the full file backup is done, the awanbee™ Pro client will continue to generate and backup only the deltas, until the next 100 deltas.
- a delta ratio ('Delta Ratio'). The delta ratio is calculated by dividing the current delta size with the actual file size. The default ratio is 50%, which means if the content of a file changes more than 50%, the whole file is backed up.

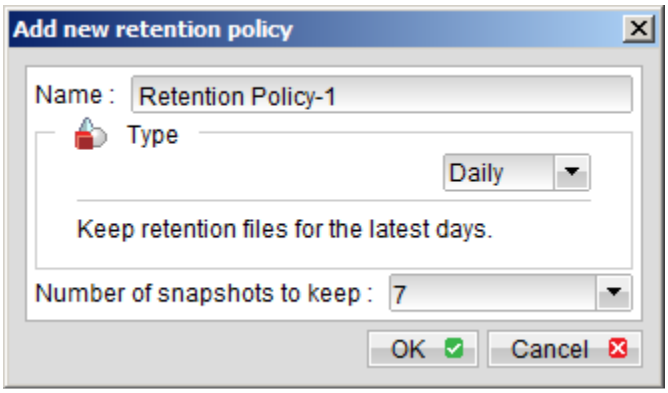
4.6.8 Retention Policy

If a file that was identified to be backed up is deleted, the awanbee™ Data Protection Server (DPS) will move the backed up copy of the file from the data area to a special area called the 'Retention area' in the DPS. The 'Retention Policy' allows you to set the number of days/backup jobs before the file is deleted from the 'Retention area'. When the file is kept in the 'Retention area', you will still be able to recover it – this is an excellent mechanism to ensure the safety of your data whereby you can still recover files deleted from your computer. Once it is deleted from the 'Retention area', you will not be able to recover it.



There are two options to define the retention policy:

- You can specify the number of days or backup jobs the files should be kept in the 'Retention area'. The days/backup jobs you can set are 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 14, 21, 28, 100 or 365.
- You can define a number of retention policies with customized information. Clicking on the 'Advanced' radio button and then clicking the 'Add' button at the bottom of the window will give you a 'Add new retention policy' window:



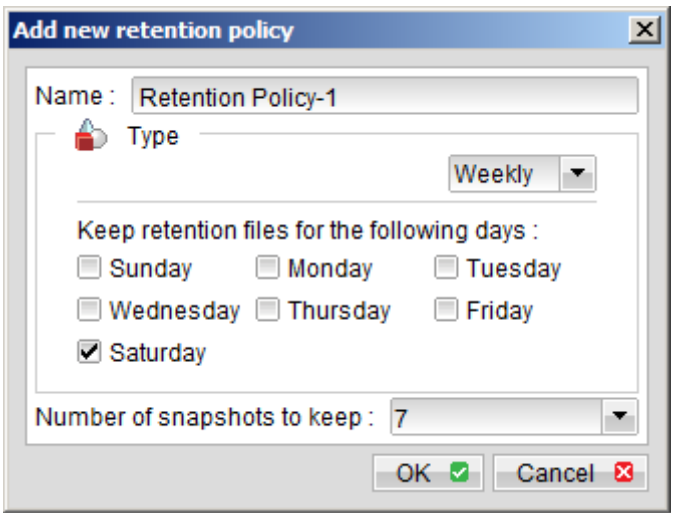
You can provide a name for each policy and define the type: daily, weekly, monthly, quarterly, yearly and custom. For the first five types, you can set the number of snapshots kept on the awanbee™ Data Protection Server. The default is 7 snapshots. After the 7th snapshot, the oldest snapshot will be deleted in order to store the latest snapshot. You are allowed to keep up to 365 snapshots.

Daily

You can set the number of snapshots of the backup to be kept. Your options are: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 14, 21, 28, 100 or 365.

Weekly

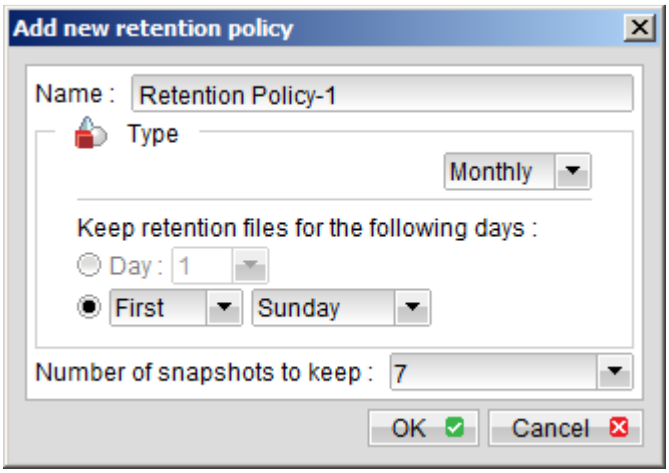
You can set the days of the week in which the files in the 'Retention area' are kept.



Monthly

For each month, you can retain the deleted files from:

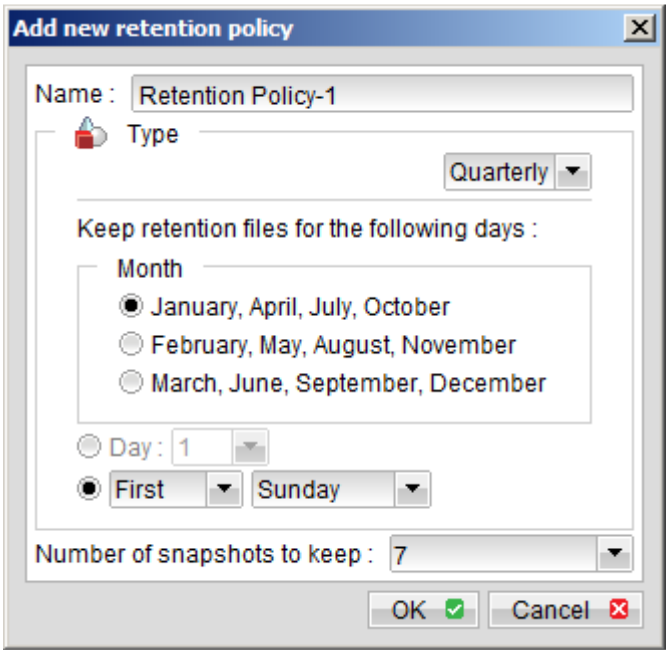
- A certain day of the month, 1-31
- First/second/third/fourth/fifth/last Sunday/Monday/Tuesday/Wednesday/Thursday/Friday/Saturday



Quarterly

As with the Monthly type, you can define the specific day. On top of this, you can set the Months in which these days fall in. You have three options:

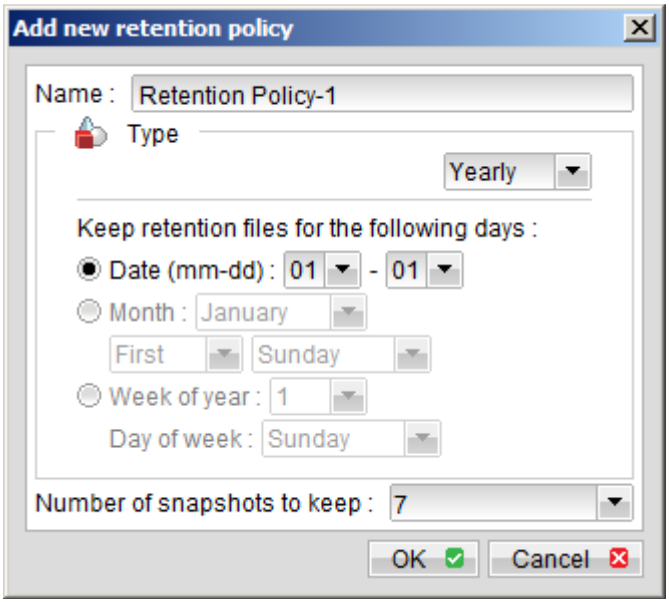
- January, April, July and October
- February, May, August and November
- March, June, September and December



Yearly

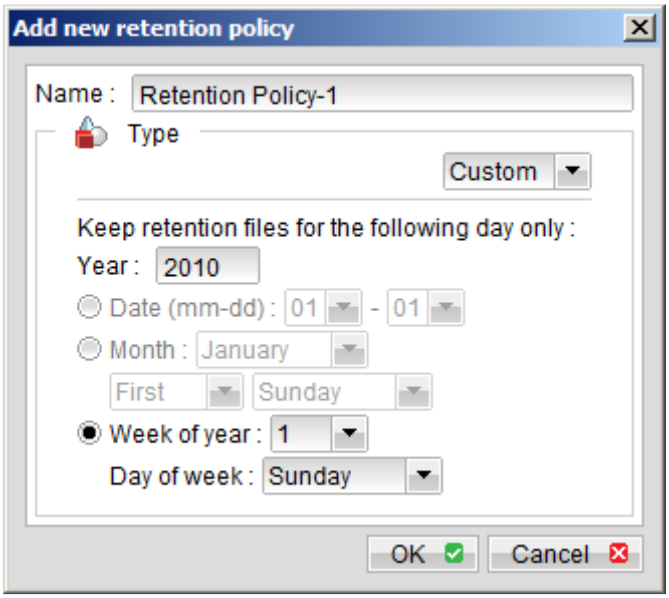
You can specify a specific day in a year. There are three options:

- Set a specific date. The date format is in the form of day-month
- A certain day in a certain month
- A certain day in a certain week



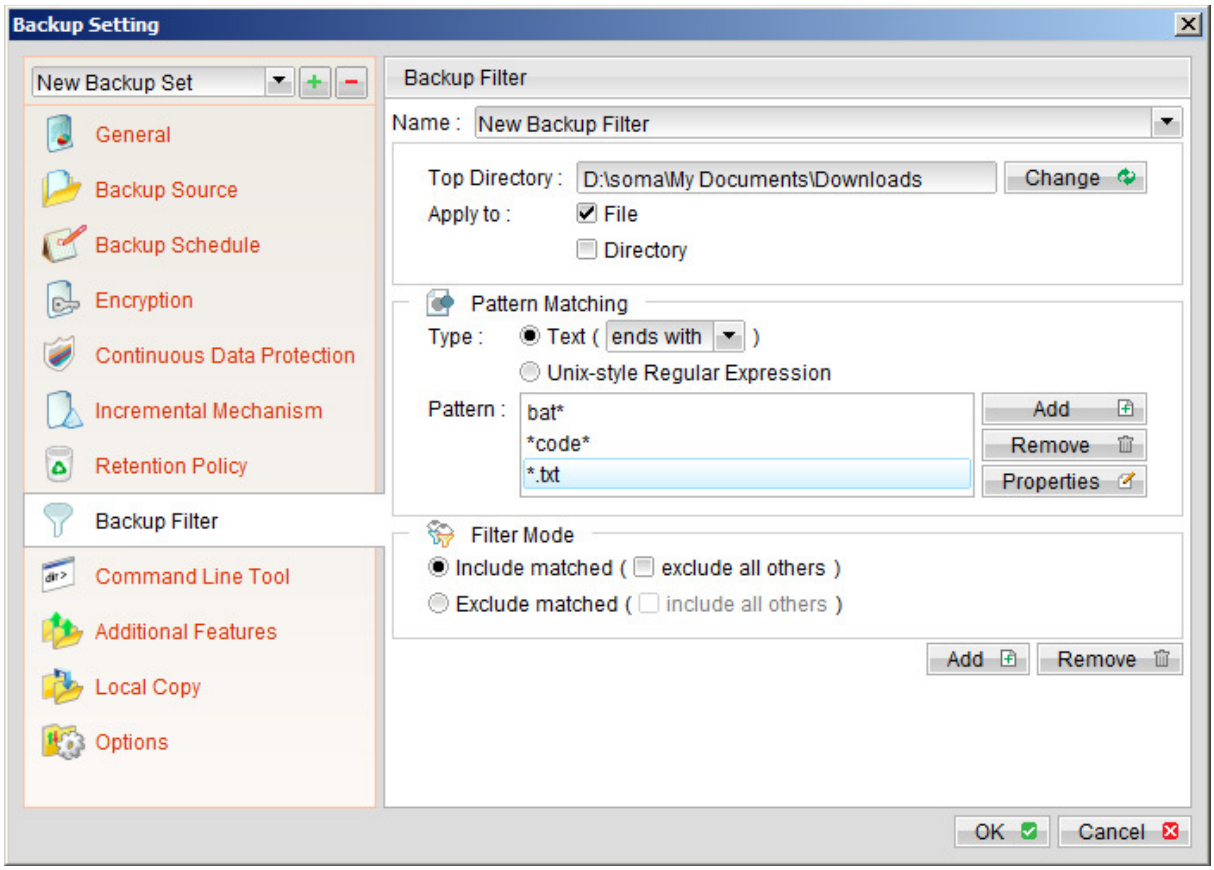
Custom

As with the Yearly type, you can define the specific day. On top of this, you can set a specific year as well.



4.6.9 Backup Filter

The 'Backup Filter' option will allow you to include or exclude specific file types from your backup set. When the files and folders are chosen via the 'Backup Source' option (Section 4.6.3), you will have to manually select each file and folder. In order to give you a better control, awanbee™ Pro client lets you define filters that will automatically choose the files and folders using simple pattern matching tools.



To begin, click on the 'Add' button (near the bottom of the window) to create a new filter and then identify the folder on which the filter will be applied to ('Top Directory'). You can state the impact of this filter within this folder to be either on just the files, sub folders or both of them ('Apply to' checkboxes).

awanbee™ Pro gives you a powerful pattern matching tool to select specific files and folders. The matching tool types supported are:

- 'starts with' – select files/folders starting with a certain pattern, e.g. all files starting with the word 'bat' is stated as 'bat*' in the pattern.
- 'contains' – select files/folders containing a certain pattern, e.g. all files containing the word 'code' is stated as '*code*' in the pattern.
- 'ends with' – select files/folders ending with a certain file extension, e.g. all text files can be stated with the '*.txt' pattern.
- 'Unix-style Regular Expression' –for advanced users, awanbee™ Pro allows you to select files and folders using Unix' Regular Expression (regex)

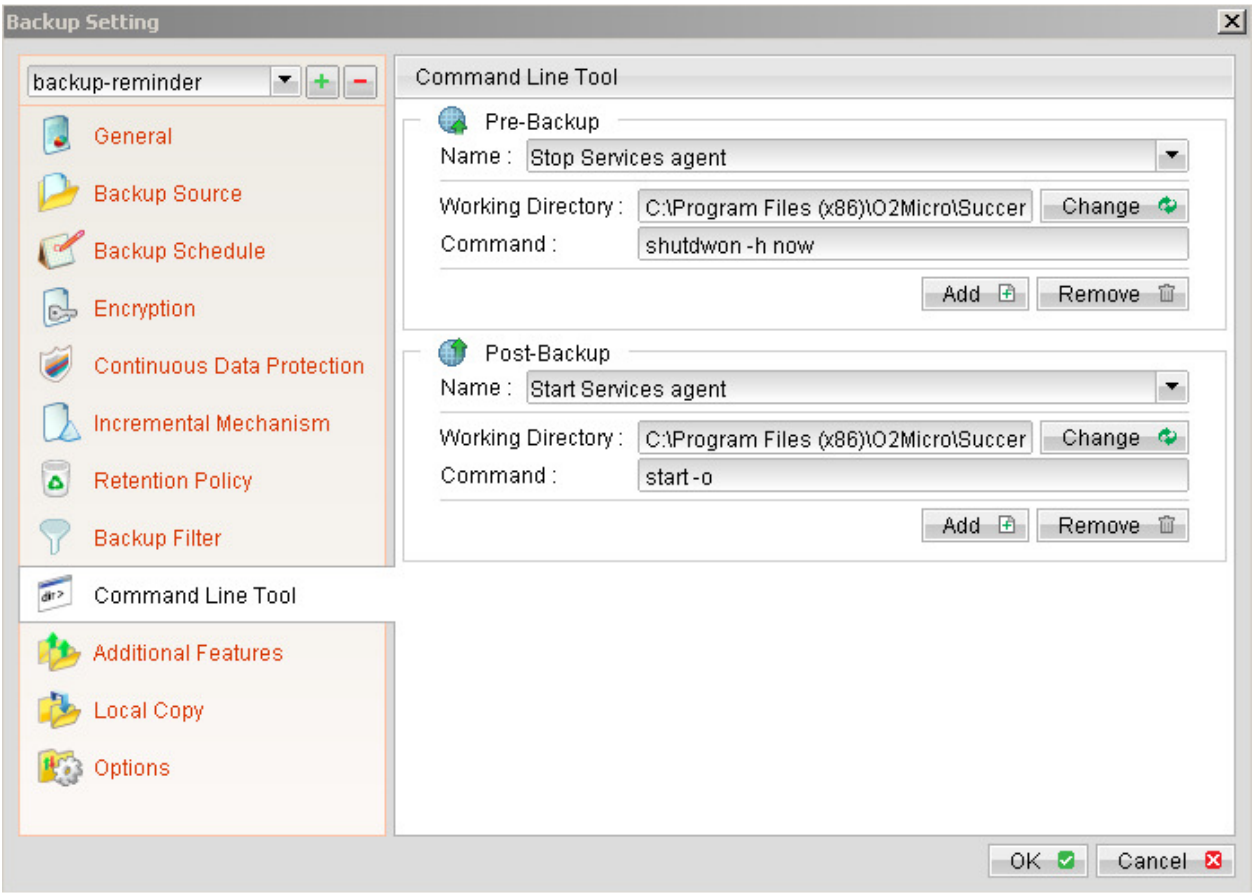
You can remove a pre-defined pattern by using the 'Remove' button and edit one with the 'Properties' button.

Once the patterns have been identified, you are then asked to state how the filtering should take place ('Filter Mode'): to exclude or include the files and folders matched using the pattern matching tool.

You can create as many filters that you want, with each having its own unique name and pattern matching configuration.

4.6.10 Command Line Tool

The 'Command Line Tool' is a feature designed to run pre-written scripts before and/or after a backup. The content of the script can be any native operating system command.



You have the option of running the script either before or after a backup process:

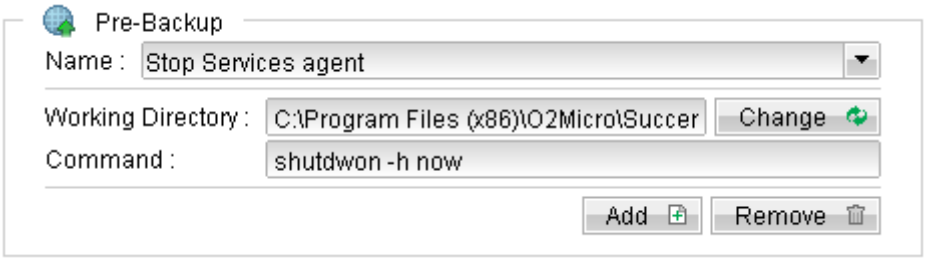
Pre-Backup

The script chosen here will be run ***before*** a backup process starts. For example, a script could be written to execute a command to close particular service before files related to that service are backed up by the awanbee™ Pro client. By closing the service, we can ensure that the files remain constant during the backup process and that there will be no conflict between the awanbee™ Pro client and the operating system when accessing the files.

Post-Backup

This script identified here will be run ***after*** the backup process is completed. For example, a script could be written to execute a command to start a certain service. This script can re-start service that may have been closed down by a **Pre-Backup** script.

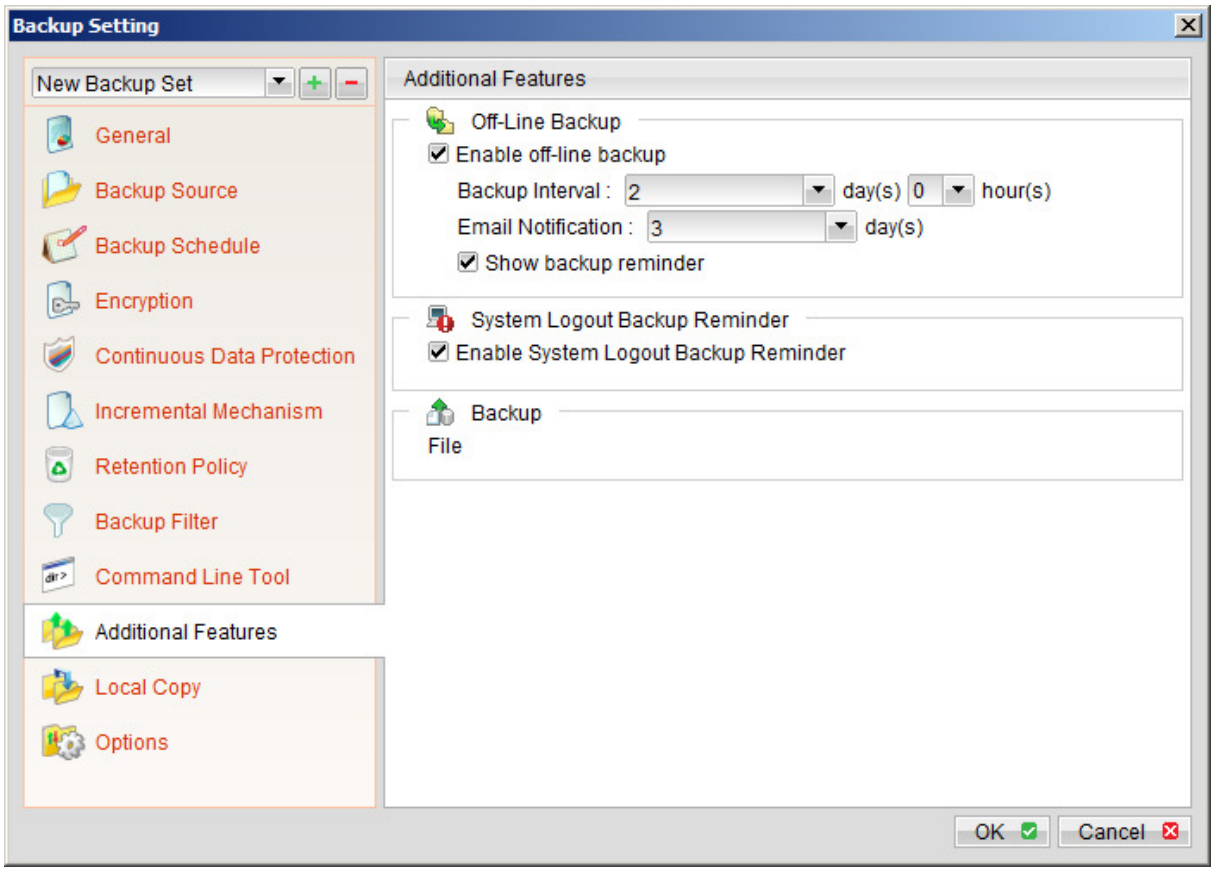
You can create as many scripts as you want by clicking on the 'Add' button. For each script, you are asked to provide a name ('Name'), state the location where the script should be run ('Working Directory') as well as the actual content of the script ('Command'). You can enter the commands directly here (e.g. start –now) or you can point to a script file (e.g. C:\Program Files\Application\start.bat)



You can remove unwanted scripts by selecting the script from the drop-down menu and clicking on 'Remove'.

4.6.11 Additional Features

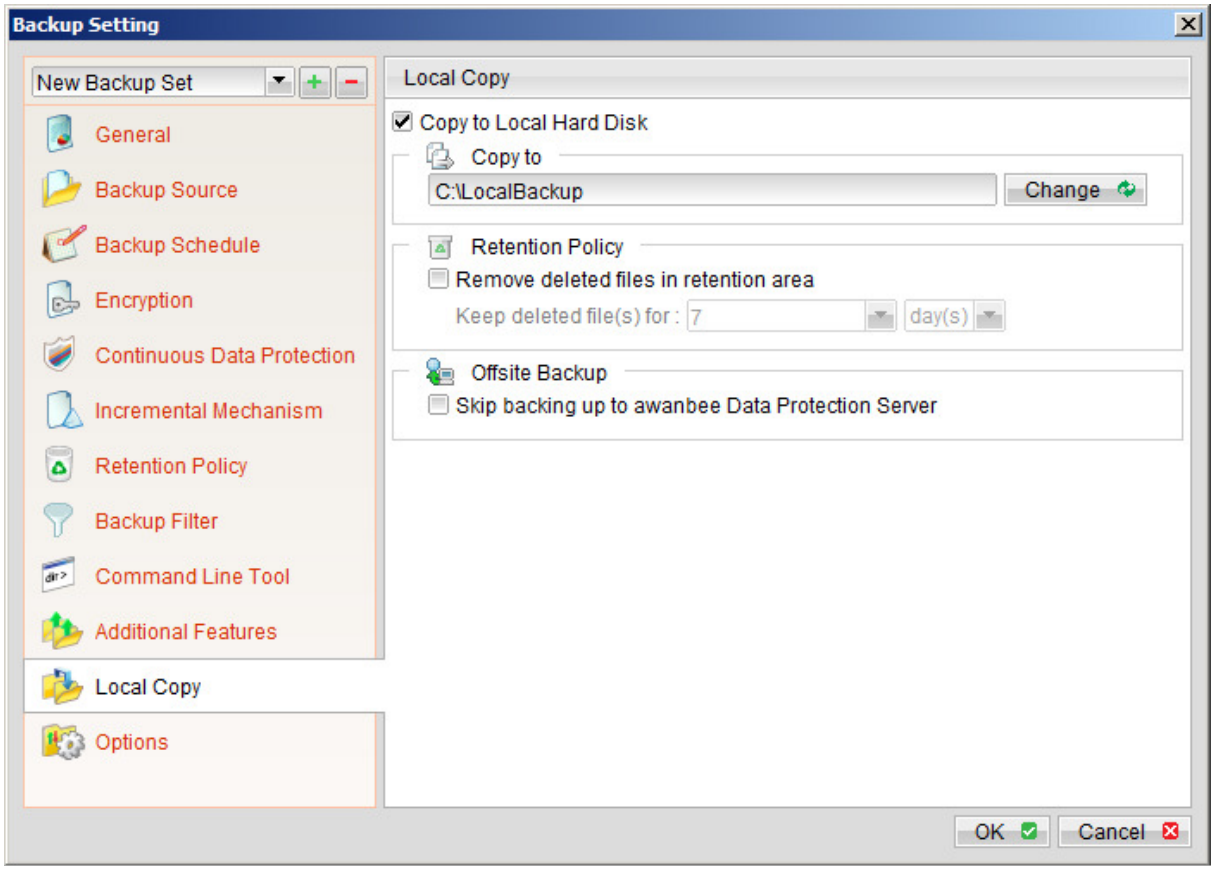
The 'Off-Line Backup' feature is a useful one for users who are not connected to the Internet at all times for the scheduled backup to the awanbee™ Data Protection Server. For example, if you are using a Notebook and do not have access to an Internet connection for a number of days, your scheduled daily backup will not be able to run. When this feature is enabled, the next time your Notebook is connected to the Internet, the backup will start automatically. The 'Backup Interval' lets you to define the duration before the backup starts when the Internet connection becomes available. The 'Email Notification' feature lets you set the number of days since the previous backup before the awanbee™ Data Protection Server sends you an email reminder to back up.



The "Enable System Logout Backup Reminder" feature, when enabled, will give you a reminder message to backup whenever you shutdown or log out from Windows.

4.6.12 Local Copy

awanbee™ pro gives you an option of keeping a copy of the backup on your local hard disk. This is on top of the backup that is stored on the awanbee™ Data Protection Server. The advantage of the feature is that it can help to reduce the restoration time as well provide another level of precaution.



To enable this feature, click on the 'Copy to Local Hard Disk' checkbox and identify the location where you would like the backup files to be stored on your hard disk ('Copy to'). Please ensure that the location selected has sufficient space to store the backup; if not you will run out of space!

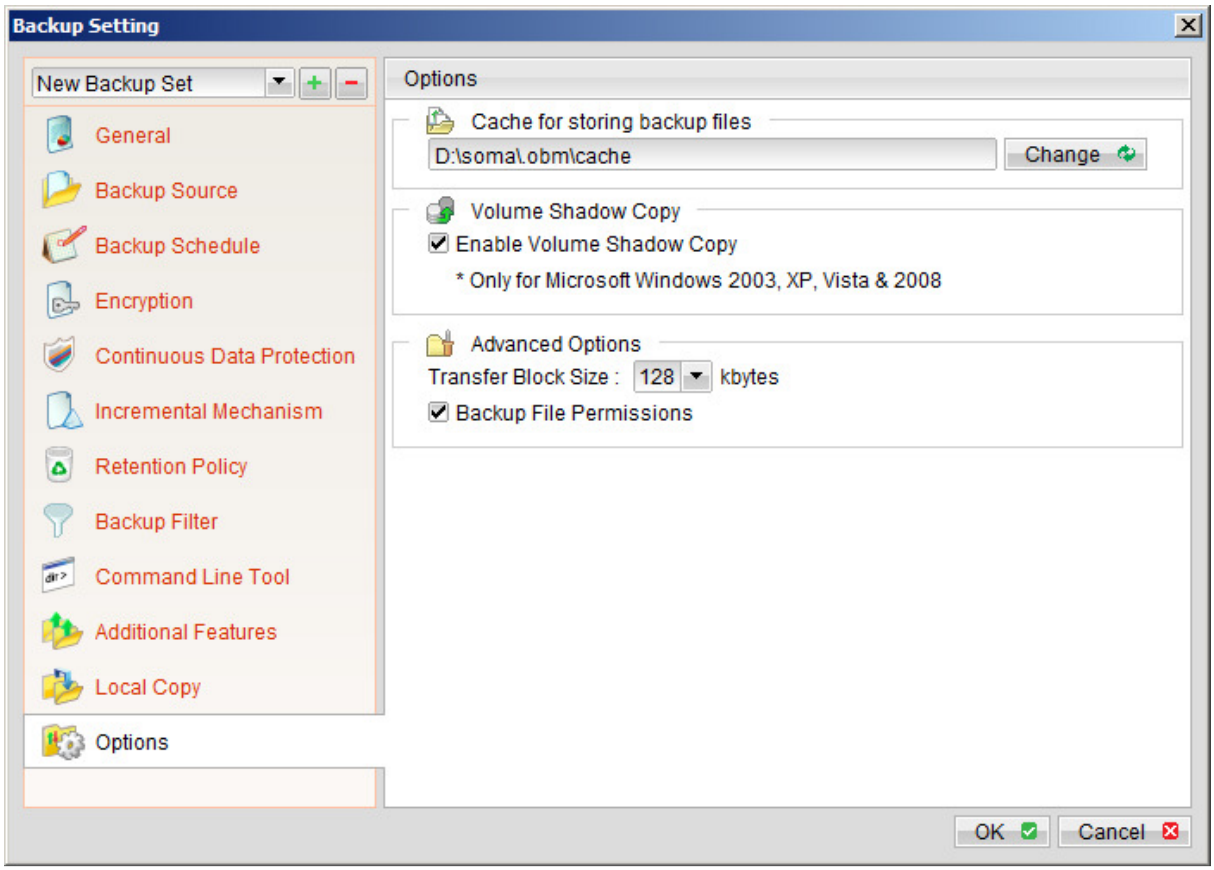
If a file that was identified to be backed up is deleted, the awanbee™ Pro client will move the backed up copy of the file on your local hard disk from the data area to a special area called the 'Retention area'. The 'Retention Policy' allows you to set the number of days/backup jobs run before the file is deleted from the 'Retention area'. When the file is kept in the 'Retention area', you will still be able to recover it – this is an excellent mechanism to ensure the safety of your data whereby you can still recover files deleted from your computer. Once it is deleted from the 'Retention area', you will not be able to recover it.

If you would like to totally skip backup up your data to the awanbee™ Data Protection Server, click on the 'Skip backing up to awanbee™ Data Protection Server' checkbox. This feature can be used when you are facing network difficulty which makes it impossible for the awanbee™ Pro client to communicate with the awanbee™ Data Protection Server. It will also speed up the backup process.

However, please note the following warning: Skipping the backup to the awanbee™ Data Protection Server will leave you totally vulnerable if anything were to happen to the local copy of the backup. Please choose this option after thinking over the implications very carefully.

4.6.13 Options

The 'Cache for storing backup files' section allows you to identify the location in your computer where awanbee™ Pro will store its temporary files. Ensure that the drive chosen has sufficient space, i.e. at least 200MB. awanbee™ Pro will use the cache to store, temporarily, the files that are to be compressed, encrypted, etc.



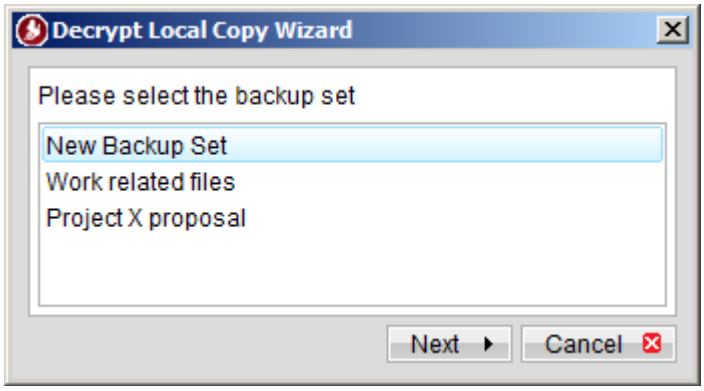
By enabling 'Volume Shadow Copy' feature, the awanbee™ Pro client will make use of Microsoft's Volume Shadow Copy Service (VSS) in order to backup file that are open or in use by another application. When this option is disabled, the awanbee™ Pro client will give you following error: "The process cannot access the file because another process has locked a portion of the file" This feature is only available in the following Microsoft Operating Systems: XP,2003, Vista, Windows 7 and 2008.

The awanbee™ Pro client transmits data in blocks (measured in kilobytes) instead of entire files at a time. This increases efficiency when compared to transmitting entire files. The bigger the block size, the better the backup speed as the number of connections required by the awanbee™ Pro client will be lesser. However, please note that certain firewalls and proxy servers have a limit on the size of each block.

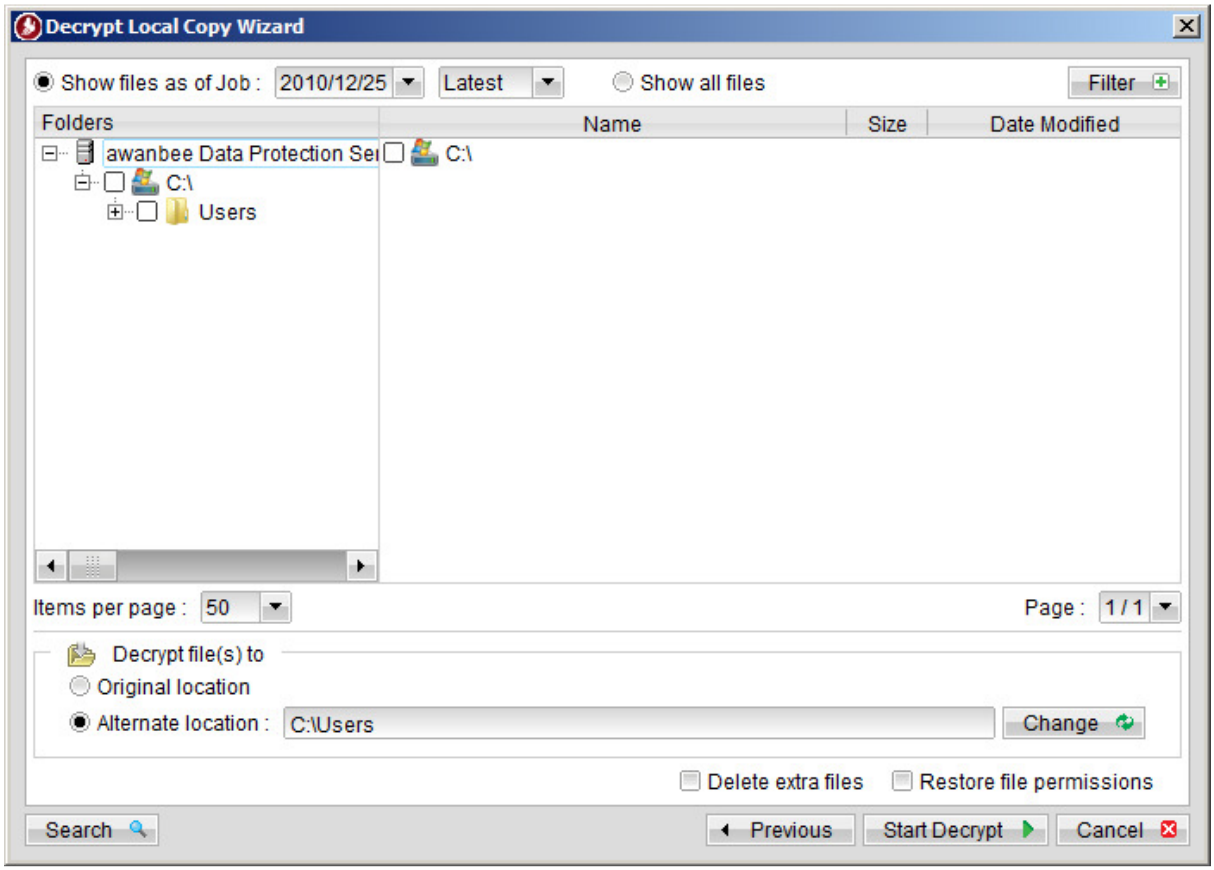
The default block size setting of 128 kilobytes is optimal for most networks and systems. Adjusting this value may or may not result in better performance, depending on your connection quality and file sizes. Note this is not the same as the TCP/IP block size. The sizes, in kilobytes, that you can choose from are: 1, 2, 4, 8, 16, 32, 64, 128 and 256.

4.7 Decrypt Local Copy Wizard

The 'Decrypt Local Copy Wizard', , will decrypt and restore the files backed up on your local hard disk. Clicking on this button will bring up a window where you are asked to select the local backup set.



After selecting the backup set, click on 'Next' to get the following 'Decrypt Local Copy Wizard' window:



Start off by selecting the files and folders backed up by date. You have two options:

- You can select the files and folders backed up as far back as 14 days ('Show files as Job' option). If you have Continuous Data Protection enabled, you can then fine tune the selection to a specific time within the selected day (drop-down menu next to 'Show files as Job') OR
- You can view all the files and folders that have been backed up for the past 14 days, including those files/folders that have been deleted, moved, etc from your computer ('Show all files' option).

For further refinement, you can use filters to choose specific files/folders by using the 'Filter' button (located at the top right) or if you're unsure of the location of the file/folder that you will like to restore, you can use the 'Search' button on the lower left.

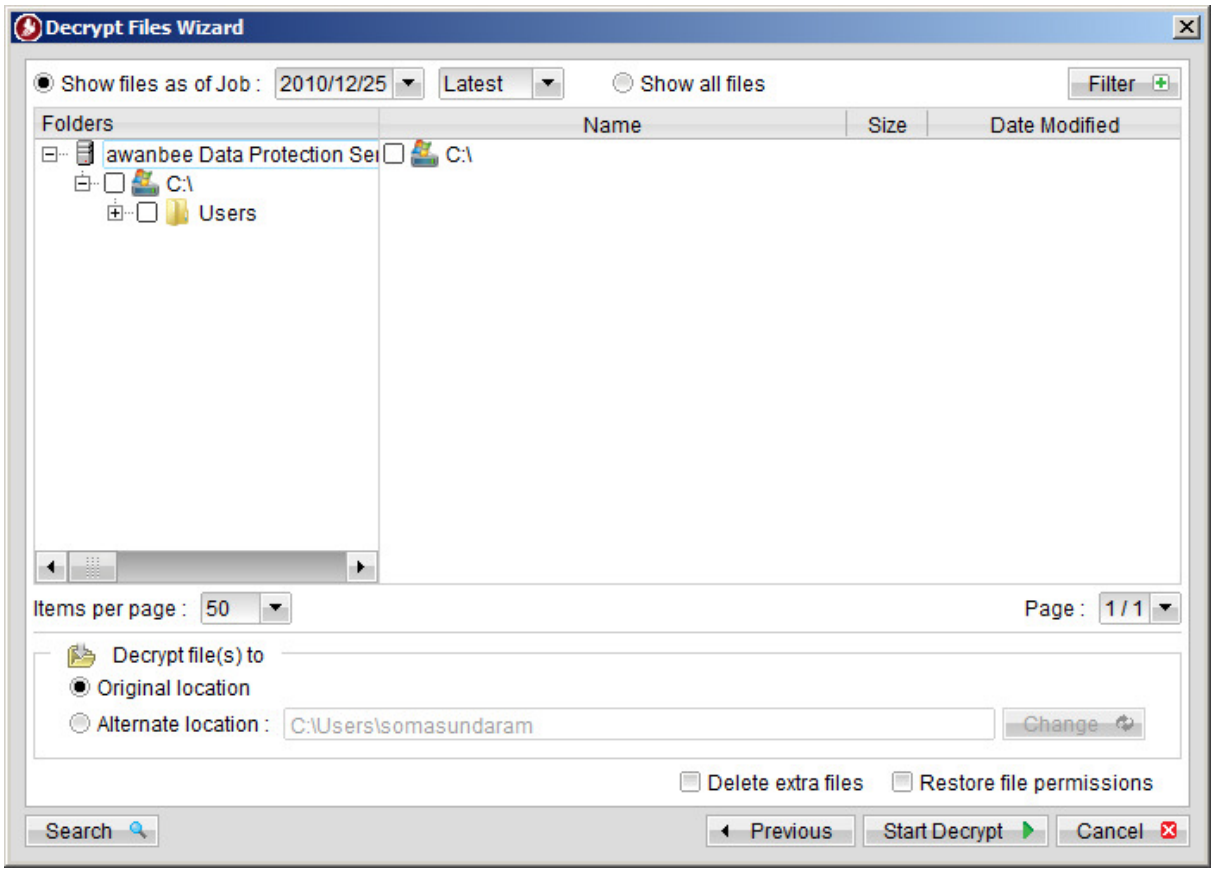
You can opt to restore the files back to the original location (from where it was backed up from) – 'Decrypt files to – Original location'. If you need to restore the files to a different location, click on the 'Alternate Location' radio button and then click on the 'Change' button to select the new location.

Once you have made the necessary selections, click on 'Start Decrypt' to begin the restoration process.

4.8 Decrypt Files Wizard

You may come across a time where you have to restore vast amounts of data from the awanbee™ Data Protection Server. Rather than carry out the restoration process via the Internet, you may request for your backup files to be sent to you via courier on a mobile storage (i.e. portable hard disk, DVDs) (contact support@awanbee.com for more detail on Terms and Conditions). Be rest assured that your backed up data are in an encrypted form; as such the privacy and confidentiality of your data remains intact at all times.

In order to restore such backup files, you will need to decrypt them first. To decrypt, click on the 'Decrypt Files Wizard' icon, . You will be asked to state the location of the encrypted files (e.g. DVD drive, portable hard disk) that was sent to you. Select the backup set that needs to be restored and then select the backup snapshot after that:



Select the specific files and folders that needs to be restored as well as the restoration location and then click on 'Start Decrypt'.

4.9 About button

The About button, , provides information on the awanbee™ Pro client software that you are using. You will find, among others, the release version, email address for Support, our website address and the name of the awanbee™ Data Protection Server that the awanbee™ Pro client is connected to.

5. Additional information

For additional information, check out our FAQ and blog at www.awanbee.com. If you have any questions, suggestions or feedback, please feel free to contact us at support@awanbee.com.